Issue 10 | August 2021
Triannual | Bengaluru

Azim Premji University

RNI No.: KARENG/2018/76591

Azim Premji University

LearNing CURVe

An Azim Premji University Publication

ISSN No.: 2582-1644

Play as Learning

Learning Curve is a publication on education from the Azim Premji University for teachers, teacher educators, school heads, educational functionaries, parents and NGOs on contextual and thematic issues that have enduring relevance and value for them. It provides a platform for the expression of varied opinions, perspectives and stories of innovation; and, encourages new, informed positions and thought-provoking points of view. The approach is a balance between academic- and a practitioner-oriented magazine.

FROM THE EDITOR

A kindergarten group in a Delhi school was looking at a globe. As children are wont to, they were squealing, asking questions and to have themselves heard, speaking over each other. The Teaching Assistant was having a hard time managing the class. So, when one child tugged at his shirt sleeve and asked him to show where Bengaluru was (her father had recently moved there), the TA reproached her, 'We are not talking about that now!'

The TA had brought the globe to class, which was great, but he had come with a set plan to 'show' and had expected a response from the children that was different from what he received. He was clearly not prepared for it, nor open. Where is joyful learning in this? Where is the nurturing of children's basic state of curiosity and wonder? How does it address their need to explore, to ask questions, learn through ways that they derive pleasure from?

The articles in this issue are broadly based on the two aspects of play in learning – the innumerable lessons that are learnt from play – teamwork, strategy, inclusion, respect, sharing, handling fights, settling arguments, addressing bullying, and second, how play can be used as pedagogy for circular learning; something as simple as counting, grouping and matching beads. There are structured activities, like watching an educational video and unstructured play activities, like pretend play. But the idea behind both is to nurture the free spirit with which a child must learn.

If this issue is received with even half the enthusiasm with which it has been written and put together, we will have achieved much. The focus articles have delved deep to reveal how learning through play is the only way for most young children to learn and learn well, a fact that is backed by science, philosophy and psychology. Many of the articles are centred around the use of play for specific learning outcomes. And, of course, there are reflections by teachers and our field members with examples and case studies on how they have woven play into their classroom processes.

Truth be told, working with authors on this theme has been a moving experience. The lengths teachers go to in their effort to bring fun and excitement in the teaching of basic skills, like reading and maths, is truly inspiring. When one author wrote, 'Our responsibility to devote time to play at school becomes even greater if we accept the fact that it may not be a part of the child's home life for a variety of reasons', I remembered the 7- or 8-year-old selling ballpoint pens at a traffic junction who asked me if I would buy all the remaining pens so he would be free to play for the rest of the day. How many did he have and how much would I need to pay were quickly calculated by him.

Before you turn the page and get to the more rewarding pieces, a reminder that this is your magazine and we want to hear your voices here, so do keep sending us suggestions, especially regarding the themes that you would like us to feature. As always, your feedback is valuable to us.

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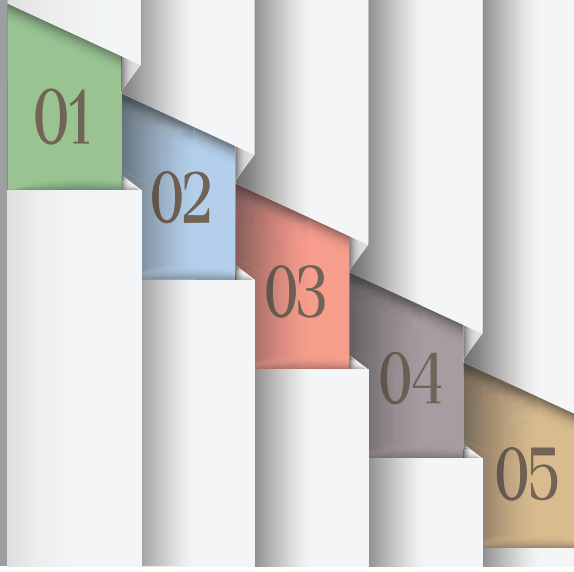

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Play and Education | Some Points to Ponder

C N Subramaniam

Abridged from a longer essay published on University Practice Connect[i]

Philosophers and psychologists define play as an activity undertaken in complete freedom, in pursuit of no other purpose than the pleasure of doing it and without being judgemental. Often, play creates a make-believe or imagined world in which normal things around us are given new meanings and uses. While psychologists have dwelt upon the role of play in the cognitive development and socialisation of the child, philosophers have recognised its importance in understanding and relating to the world around us even as adults.

Hunter-gatherers observed during the last century across the world reinforce their egalitarianism through play and humour and cultivate this by allowing their children to play all the time without adult care, supervision, or instruction. The children did not have chores to perform and appear to have learnt mostly through play, which often included role-play of adult behaviour. 'Hunter-gatherer adults, however, do not concern themselves much with their children's education. They assume that children will learn what they need to know through their own, self-directed exploration and play. In play, hunter-gatherer children, on their own initiatives, practice the skills they will need for survival as adults. In their play, they also rehearse and build upon the knowledge, experience, and values that are central to their culture.' (Gray, 2009, p 505) Of course, children participate in adult activities, but voluntarily. Observers have specifically noted that the games of hunter-gatherer children are never competitive. 'The point of hunter-gatherer play is not to establish winners and losers but to have fun. In the process of having fun, the players develop skills requiring strength, coordination, endurance, cooperation, and wit, and they solidify their bonds of friendship.' (Ibid. p. 514)

We have the study of the *Murias* (a Bastar tribe) by Verrier Elwin (Elwin, 1947) in which children inhabit a world of their own, institutionalised as the *ghotul*, which has close interaction with the adult world but is independent of it. It is a world of fun, frolic, song dance, games, mock and serious work. Elwin describes the singing and dancing, games and other 'recreations', all examples of children organising and managing their own institutions of education and socialisation, using play extensively in the process.

In a society of nuclear, stratified and individuated families as ours, it may be difficult to imagine *ghotuls* as the loci of children's education. Nuclear families and adult-directed nurseries, kindergartens and schools have been firmly established as the institutional basis of children's education and socialisation. Even so, play continues to have an important function in the socialisation of the child, especially with adult participation in it.

The child is not mastering the world of knowledge or reason while playing. She is merely getting immersed in the community of adults who relate to the world in a particular way. It is this immersion in the community which enables the child to eventually inherit the knowledge, symbols, tools and values developed over generations by the community. This means 'to let the child be like one of us, that is, participate in human modes of living. And it is through play that we let the child participate and experience what it is like to become the kind of human being that she can potentially be.' (An, 2018)

Deploying play

Plato (428-348 BCE) was amongst the earliest thinkers to recognise the importance of play in the education of children. He advised pedagogues to eschew force in education and use play in its stead. In his *Republic*, after insisting that the training in dialectical thinking must begin in childhood, he equally strongly counselled against forcing children to learn. '... the instruction must not be given the aspect of a compulsion to learn. Because... the free man ought not to learn any study slavishly. Forced labours performed by the body don't make the body any worse, but no forced study abides in a soul.... Therefore, ...don't use force in training the children in the studies, but rather play. In that way,

you can also better discern what each is naturally directed toward.'

Play is set in contrast to three phrases - compulsion, force and slavishness. Forcing or compulsion is equated with slavery. Instead, play is recommended implying that under conditions of play, children will learn of their own free will and internalise their learning.

Plato subverts all elements of play in the service of educating children as responsible and conforming citizens. Children's play is divested of autonomy, pleasure, purposelessness, creativity, eschewing judgements etc. and only the shell remains as if to trick the children.

School teachers and pedagogues will immediately find a resonance between Plato's views with the current educational practices. Since children prefer playing to studying under the teacher's direction, a teacher may structure pleasurable games which serve the pedagogic purpose of training children to conform to norms, develop skills necessary for practising adult crafts or professions. This essentially is the 'play-way' method advocated in popular educational wisdom.

As modernity dawned in Europe, a sharp distinction between work as productive activity and play as indulgence overtook popular imagination. This was also the era of industrialisation when work was becoming more and more alienated, and more and more children of the working class were drawn into the drudgery of the most horrible kind. This set the context for the re-discovery of play as the noblest and the most delightful activity for children. Friedrich Froebel (1782-1852) was a strong advocate of using play as the primary way of learning for very young children (of kindergarten age). To Froebel, the play of children was the 'purest, most spiritual activity of man' and 'typical of human life as a whole – of hidden natural life in man and all things.' (Beatty, 2017, p. 425). He sought to develop play as the predominant method of education and ended up developing a new orthodoxy that made children go through highly structured games under the direction of the teacher.[ii]

John Dewey adopted Froebel's principles for the 'sub-primary department' of his laboratory school but found his actual curricular design to be at variance with the principles and ended up changing them substantially.[iii] Dewey became one of the principal advocates of incorporating play in school education, especially of the very young children. He stated the importance of play rather forcefully: 'numberless spontaneous activities of children, plays, games, mimic efforts, even the apparently meaningless motions of infants – exhibitions previously ignored as trivial, futile, or even condemned as positively evil – are capable of educational use; nay, are the foundation-stones of educational method.'[iv]

Dewey gave his own twist to the understanding of play as not a mere outward activity but (that which) had something to do with mental attitude as a whole. 'It is the free play, the interplay of all child's powers, thoughts, and physical movements in embodying, in a satisfying form, his own images and interests.'

To Dewey, there was no hard- and fast-line dividing play and work; he saw the two as part of a continuum, one flowing into the other seamlessly. The firm line drawn by others between work and play divided by the sense of purpose characterising the former and purposelessness of the latter was rejected by him. Both originated in an inner impulse rather than an external pressure or obligation. To him, play and work constituted two main aspects of the outside life which he wanted to use to end the alienation of formal education.

Dewey emphasised that the 'start must come from the child' – even if a teacher may give him or her some models to develop his ideas, the child, in order to become independent and develop, must return to his or her own imagery. All activities had to 'carry the child on to a higher plane of consciousness and action, instead of merely exciting him and then leaving him just where he was.' (Dewey, 1915) He states it more bluntly in his *Democracy and Education*: '... these things shall be subordinated to education - that is, to intellectual results and the forming of socialised dispositions.'

Dewey, thus, was not free of the anxiety of modernity about a childhood left to work itself out without adult supervision, protection or direction.[v] After all, modern civil society or Dewey's democratic community was constituted by a citizenry that was socialised for a participatory and orderly democracy, which required voluntary consent on the part of the individual to social controls.

The anxiety about childhood, to a large extent, stems from the recognition of the failure in containing social conflicts and tensions and ensuring peace and justice in society. It is the spilling over of these conflicts into children which perhaps lies at the root of the anxiety. In the post-liberalisation era when social inequalities have increased to unprecedented levels and control over productive resources by a handful of corporate houses shatters the dream of a democratic society, the race to access the only capital resource open to the larger humanity, that of literacy and numeracy and the cultural capital of formal education speeds up.

Play in Indian educational practice

By and large, the Indian schooling system bypassed the pre-school age group till very recently when the role of nursery and kindergarten began to be seen as vital in ensuring socialisation of children into 'school-readiness'. This meant disciplining children into sitting 'quietly' in a packed classroom, following the orders of the teacher and equipping them with literacy and numeracy skills prior to admission into formal schools. Toys, games, songs etc, were used to entice children into this world. As a researcher surveying 'play-way' in pre-school education dryly noted, 'preschool in India is serious business.' (Prochner, 2002, p. 446) Despite repeated well-intentioned policy pronouncements, the education component of the early childcare system run by the Women and Child Welfare departments has been non-existent or, at best, is a bad attempt at teaching reading and counting. This effectively means that play has been absent from where one could have most expected to see it – in pre-school education. Our primary and subsequent stages of education have had even less space for play. At best, there is a 'games' period in which children play rule-bound games.

But then, children are children and find spaces for play; they steal time from 'education' to play; to be themselves. The curriculum and expectations from children, till recently, allowed children some free time to play with themselves, siblings or friends and neighbours and even elder relatives. It is for this space that recent trends in education and entertainment are competing – education to prepare the future worker in the service of global capital and entertainment to corner the present consumer. Play becomes the sugar-coating to entice both the student and the consumer in the service of global capital and the nation-state.

The massive campaigns mounted since the 1990s globally sought to enlist play and fun for the cause of spreading literacy by introducing what was termed variously as 'play way' or 'joy of learning' or 'learning is fun'. Activities considered to be close to play became the standard fare of recommended classroom processes in the early literacy levels. Singing rhymes, simple games, manipulation of concrete objects, like toys (TLM) etc, were no longer confined to elite schools but could be seen practised by the contract teachers of humble government schools too. This helped change the ambience of the classrooms and attract children into them. However, this veneer was soon to wear off as it became evident that it did not really help in ensuring 'achievement' or increasing the scores of schools in standardised tests.

Now began the race for testing-driven, 'targeted' teaching of alphabets and algorithms to ensure that children managed to clear the predictable tests. In the higher grades, pressure mounted on children to increase the quantum of time spent on 'studies, tuition and homework' and prepare for the ubiquitous exams, tests and 'project work'. If all this stole away children's leisure time that could be spent on play, they were amply supplemented by the digital games, TV shows and virtual communities purveyed by the IT industry.

As is evident that both these phenomena share the feature of assuming the form of play to grab the attention of children and disciplining their minds and bodies in the name of education and dumbing down their sensitivities and link to real life around even as they participate in a burgeoning market apparently as free consumers.

Adult world and children's play

Play, unlike other activities, can be self-reflective – it is play because one knows that one is playing. This helps one in disengaging from what one is doing even while doing it and reflecting on it and eventually, in building a mindset in which one does not take oneself too seriously. Adults need play as much as children, if not more, to retain their sanity.

Whatever benefits it may have for younger children, pedagogic use of play is one way of reminding adults of the wonderful delights of the world of play. In fact, celebrating children, witnessing their play, participating in it and recounting it is a way of fulfilling this vital need. This gives us a clue to the use of play in school pedagogy.

The best way for a teacher to 'use' play is to make the effort and learn to enter children's play and participate in it. There is no shortcut to this. First, it requires children to feel safe with their autonomy and initiative to initiate play in the school context and the presence of the teacher. Secondly, it requires the teacher to shed her/his inhibitions to enter children's play as an equal participant without imposing a pedagogic purpose.

Christopher Joseph An (2018) argues for an approach in which the 'joint attention' of adults and children in play which enables children to acquire the complex mental equipment to make sense of the world and interact with it. It is not rational instruction but active 'shared' participation in the imagined world initiated by the child that enables the child to get her bearings as a rational and autonomous agent in the world. The agency of the child provides the setting for the adult caregiver and the child to jointly explore the world, share linguistic and rational tools, and acquire methods of endowing things with value and meaning. The child's playful exploration of the world, by seeing, hearing, grabbing and tasting things, when accompanied by an adult, results in an interactive exchange of knowledge, values, meanings and modes of using the objects around. Play postulates imagination as the key capacity required of the child. At the same time, adult participation in children's play helps children to be socialised into ways of reasoning and moral decision-making which make us rational and responsible in the exercise of our autonomy and freedom.

Only when play becomes a shared activity and has 'joint attention and participation' can it become a pedagogic tool for scaffolding children's making sense of the world around them and entering the adult community as equals.

Recovering time for play

As anxiety about children not learning enough or buying enough mounts in our neo-liberal era, it seems less and less possible to create playful situations in schooling which is, in any case, too closely controlled by the state and the market to be a free space. The need, then, is to struggle for space and time free of such controls, for both adults and children to enter the world of play – free of purpose, for pleasure and with a sense of freedom.

In many ways, the struggle for an 'eight-hour day' of the workers of the last century which now appears a utopian dream is central to the project of recovering play in our lives. This is now increasingly becoming anachronistic as the boundaries between 'office time' and 'office space' and personal time and space and between market and home, both for children and adults, have been blurred in recent years. This is true for the middle classes, as well as the sea of 'self-employed' workers. What we need to do is to reflect upon ways in which our minds and bodies can be freed in these times when state and capital invade and erode every sphere of our being. Play, then, is the key to this struggle of adults for freedom too.

It may be pragmatic to find spaces and times outside those formally committed to institutions, whether the workplace or the school, on the lines suggested by Ivan Ilyich to create community learning spaces outside of schools. These spaces would lead to engagement in playful activities by different age groups besides deliberate learning activities.

We need not give up on formal spaces though. Play, like creativity, is a commodity that is required also to sustain the state and the market. We can indeed find ways of incorporating playfulness in developing the curriculum. For example, the 'what if' discussions, which seek to imagine a world in which some norm is broken – what if I were the king, or what if adding two and two makes five, and five and five make seven? The range of 'what if' situations can be broadened as a part of the formal curriculum to enable a playful exploration of alternative, imagined, illusory worlds. To what extent this exercise will be in the realm of play and when it will become an onerous task, of course, is anybody's guess.

Play is not all mental activity; it is a very sensuous and pleasurable activity involving the manipulation of physical objects as their meanings transform from the conventional ones. Play, thus, requires engagement with the physical world around, through corporeal activity. In fact, the abundance and richness of objects induce play. Perhaps our classrooms are kept so bare because the abundance of objects at hand leads children and teachers astray into the world of play. When children and even adults encounter rich and varied collections of objects with time and freedom at hand, they can easily slip into play.

If sensuousness and imagination form the two

poles of play, it is impelled by a sense of freedom and pleasure. When a child is caught daydreaming in the classroom staring out of the window, let us know that she is exercising her freedom to play. This pursuit of pleasure with freedom will eventually help us build a new world, an illusion today that may be a reality tomorrow.

Endnotes

i CN Subramaniam 'Sovereignty, Pleasure, Illusion and Play' https://practiceconnect.azimpremjiuniversity.edu.in/sovereignty-pleasure-illusion-and-play-part-i/

ii Froebel was prompted by the make-believe games of children to insist on the use of symbolism in the activities and also strictly aver the use of real objects, insisting on the use of make-believe objects instead. Make-believe objects were supposed to trigger imagination in children.

iii For Dewey's critique of Froebelian methods see his lecture entitled 'Froebel's Educational Principles' incorporated as Chapter V of his book, *School and Society*. Dewey rejected the externally imposed structured games, the fetishism of symbols in the activities and the huge array of subject matter to be dealt with in the preschool stage.

iv Dewey, 'Froebel's Educational Principles'. This was one of the three key principles he extracted from Froebel's work.

v Gijubhai Badheka, the much-acclaimed Gujarati pedagogue, in his description of children playing in his imaginary school, demonstrates the possibility of the class descending into Hobbesian 'state of nature' without the guidance of the teacher. He advocates play as an important educational method when under the guidance of a wise teacher. See Divasvapna Part 1, section VII.

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Play for All | Designing Inclusive Play Spaces

Rajashree Srinivasan

I go back to the year 1999 when I was collecting data for my Ph D work at a school which then called itself 'inclusive', for, in that decade, it was deemed so if schools had a separate building for educating children with disabilities within the precincts of a regular school. During lunch and playtime, I watched non-disabled siblings and friends of children with disabilities standing outside the gates of this wing, waiting to embrace their siblings and gleefully clasp their hands and run towards the playground. While many struggled to run, what stood out was laughter, screams of joy, camaraderie, warmth, and empathy. When it was time to return after recess or play, it was a sad sight to watch. Children with disabilities never wanted to return to their classes. Their siblings would sit for a while to placate them. Teachers would offer comforting words. Many children asked their teachers, 'When can I go to 'that' school (pointing to the building where their non-disabled siblings studied)?'. Disquiet prevailed. Many questions came to my mind day after day: Will children with and without disabilities ever study and play together? Will it always be the children who would have to make the accommodations and adaptations? Will school and community settings ever take the onus for children and align themselves to the everyday lives of 'all' children? It is more than two decades now and there seems to be light at the end of the tunnel towards realising the vision of inclusiveness.

The wellness of young children is a critical building block for imagining an inclusive and peaceful society. Family, peers, school, media and internet, communities and government policies play a critical role in the physical, cognitive, socio-emotional and moral development of children. Varying contexts of development have led to a diversity of experiences among children. The basics of health, nutrition, safety and care have been compromised for several young children. Exclusion and violence have pushed them to the margins, even as some emerge agentic and resilient. In response to the diverse childhood experiences, the last three decades have seen a host of children-related policies and initiatives. The principles of universality, equality and obligation of the state, embedded in the Child Rights approach, with its many debates and contestations have been an important point of reference in articulating care, protection, survival and participation of children. Along with health and education, play has been recognised as a right for all children for it is in this ludic activity that children discover the depths of shared humanity, empathy, agency and freedom. Despite facilitative policy contexts that aim to promote the social inclusion of children, many continue to be deprived of play.

This article will discuss the significance of play, with specific reference to the inclusion of children with disabilities. The first section will examine the benefits and barriers to inclusive play in school and community spaces. The second section will briefly outline the policy contexts in India and examine some of the efforts towards inclusive play in community playgrounds in India. Finally, the essay will draw out some broad principles to nurture inclusive play in school settings in India and call for collective action among the actors associated with the lives of children with disabilities. The article will use the definition of disability as proposed by the Rights of Persons with Disabilities Act (RPWD), (GoI 2016): Person with disability means a person with long term physical, mental, intellectual or sensory impairment which, in interaction with barriers, hinders their full and effective participation in society equally with others.

What is inclusive play?

Play is a valuable and enjoyable activity. It should be fun, passionate, spontaneous, self-initiated and purposeless and a process through which children learn without being taught (Piaget, 2007). This articulation renders a view of play for the 'sake of play' which is usually the reason why children engage in play. Referring to play as an explanation of childhood, Besio (2017) observes, 'The time a child devotes to it, the intensity of his or her concentration while playing, the absoluteness of the emotions that this activity visibly stimulates,

the flexibility it demonstrates in changing according to the variation in ages, environmental conditions, companions and constraints, the stability with which it occurs in every geographical area, in every era and every culture, all these features have given play a special status in this unique period of human life called childhood (emphasis in original).' Play is thus seen as co-evolving with the child and shaped by the child's ecologies of development, including the geographies, histories and culture within which the child is located. Play also unfolds a series of developmental changes that favour the health and well-being of children. From being a source of pleasure and exploration beginning within the walls of the family to community playgrounds or parks, play also finds its way as a mediating tool for learning in educational and developmental intervention settings, to achieve certain purposes.

Like all children, children with disabilities share their feelings, intentions, desires and views and enjoy playing. Research confirms that for children with disabilities, play is an important way in which they make friends (Jeanes and Maggie, 2012). For many of these children in India, their home- or school-based play are the only contexts for play. There are very few parks and playgrounds where children with disabilities can be found playing. Most schools and community play spaces (parks and public playgrounds) are often designed from the perspective of those without disabilities. Inaccessible structures of playgrounds, lack of trained staff to oversee the play, absence of allocation of free play time for children, resistance from children themselves and substitution of therapy sessions in place of play are some of the common challenges in special schools that render almost no access to play spaces for children with disability.

These limitations to children's play seem to be rooted in several reasons: First, environment-related factors: design of spaces, toys, materials, play equipment may not be accessible or inclusive. Second, societal factors that include assumptions and beliefs of parents, other significant adults, teachers, peers and policymakers about what children with disability can or cannot do in general, and specifically, at play. Third, children-related factors, which may include the inability to play on their own or initiate play, fatigue, difficulties in communicating with peers, among others, may emerge from impairments to the body structures and functions. Finally, the competence and abilities of parents, teachers and other non-teaching staff in schools to engage with children with disabilities. In other words, accessibility to play does not seem to be a function of mere design or layout but lies in the complex matrix of social interplay and relationships that exist among the various participants associated with the play of young ones. Given that there are a variety of disabilities and associated subjective experiences, it may be challenging to develop a truly inclusive play space. Reaching that level requires tremendous work but given the positive effects of inclusive play, all efforts need to be made towards it.

Inclusive play may be defined as play amongst children with varied abilities. It is about creating places where individuals with and without disability are able to engage in play together allowing barriers to be bridged and contact and social acceptance to be established (Jeanes and Magee, 2012). Three important characterisations emerge: First, it refers to processes of emerging social relationships embedded in particular settings (educational or community or family) based on the philosophical belief that all children with and without disabilities, have the right and need to play together. Second, it places responsibility on the societal actors to create spaces for interaction to ensure that the play settings embrace children of varied backgrounds and abilities, where children are also invited to participate fully in the proceedings of the play spaces. Third, it brings to the fore outcomes of such a social relationship. It signals the benefit of communication and connectedness which are the building blocks of democratic spaces and social inclusion, aimed at the well-being of children.

Casey (2010) argues for inclusive play spaces as it influences children, families, schools and community at large in positive ways. For children, it conveys a message that there are similarities and differences among people, and a sense of being included and supported (peers are a particular source of motivation, inspiration curiosity and stimulation). For families, an acceptance of multiple perspectives and improving the quality of life through communicating with other families. For schools and the community, a sense of cohesion

and connectedness. In fact, through such a process of social inclusion of children with disabilities, play can be viewed for its own sake or playfulness rather than effective means to reach educational, behavioural, developmental objectives (Besio, 2017), which is often the focus for children with disabilities.

Efforts towards inclusive play

Policy interventions

According to the 2011 Census, there are 26, 810, 557 persons with disabilities in India constituting 2.21 percent of the country's population. The total number of children with disabilities (in the 0-19 years age group) is 7,864,636. Further, only 61 percent of children with disabilities aged between 5 and 19 years were attending an educational institution (Census of India, 2011). Including children with disabilities in education and other spheres of life has been a topic of recurring importance in policies and legal frameworks in India. International policies have also informed the formulation of nation-level efforts in the last three decades. The Convention on the Rights of the Child recognise the right of the child to rest and leisure, to engage in play and recreational activities appropriate to the age of the child and to participate freely in cultural life (Article 31; United Nations, 1989). The Convention on the Rights of Persons with Disabilities emphasised that children with disabilities have equal access with other children to participate in play, recreation, leisure and sporting activities, including those activities in the school system. (Article 30, clause 5d; United Nations, 2006). Both these have been ratified by India.

A game-changer was the Right to Free and Compulsory Education (Amendment) Act (GoI 2012), which brought all categories of children with disabilities into the folds of the regular schools by ensuring free and compulsory education. The RPWD Act clearly directs the state governments to make schools accessible and offer inclusive participation in sports and recreational activities. Further, Chapter 1 (Section 2 (ze)) emphasises the idea of universal design. It states: the design of products, environments, programmes and services to be usable by all people to the greatest extent possible, without the need for adaptation or specialisation. *Universal Design Learning* (UDL) principles have been used in several countries for inclusive pedagogical practices and for designing inclusive play spaces for children. The *Samagra Shiksha Abhiyan*, initiated in 2018, clearly specifies inclusion as a guiding principle. Chapter 4 of the Framework document, *Inclusion of Children with Special Needs in Education*, states the need to: 'to enable all children and young persons with disabilities to have access to inclusive education and improve their enrolment, retention and achievement in the general education system' (GoI, 2018, p. 61). Another objective states the removal of architectural barriers in schools so that students with disabilities have access to classrooms, laboratories, libraries and toilets in the school. But playgrounds have not been included and play does not find a mention in this chapter. Even in the recent comprehensive UNESCO (2018) Report on the State of Disabilities in India, there is neither a mention of sports or recreation nor of play or playgrounds in the important chapters on barriers to inclusive education and the recommendations nor has play been deliberated as a strategy for inclusive education, given the growing recognition in research on the importance of play in education in the pre-school and primary years.

Such contradictions seem to be common in many policy documents. Play as one of the strategies for classroom practice in foundational and preparatory stages has been suggested in the National Policy on Education (2020). In para 6.10, it states, 'Children with disabilities will be enabled to fully participate in the regular schooling process from the foundational stage to higher education'. In accordance with the NEP (2020), SARTHAQ (Students' and Teachers' Holistic Advancement through Quality Education), the implementation framework states that all states/UTs will undertake mapping of requirements of students with disabilities for participating fully in school education and this will include mapping of arts, sports and vocational education. It also highlights the strengthening of the existing *bal-bhavans* for play-related activities and integrating them into the school cluster. If implemented well, this is an excellent opportunity for bringing children with and without disabilities together. Play and education are closely related, and since children's rights are interdependent and indivisible, more concerted efforts at the provisioning of play for all will need to assume high importance.

Interventions led by civil society

Alongside these policy interventions, India has a long history of civil society organisations working towards the inclusion of children with disabilities in public places. Parents associations have

spearheaded many movements and initiatives. One such pioneering effort is by *Kilikili*, an NGO based in Bengaluru. *Kilikili* aims at developing inclusive public play spaces in Bengaluru, that would enable children with disabilities to secure their right to play alongside children without disabilities in these spaces. To accomplish this task, *Kilikili* brings together two sets of stakeholders – the local municipal corporation as one and parents, volunteers, disability rights organisations, citizen's groups, resident's associations, special and regular schools as the other. They have so far created eight inclusive play spaces in six cities, of which three are in Bengaluru. These inclusive play spaces have been used to organise weekly events by volunteer groups that bring together children with and without disabilities. They have developed a set of guidelines to be followed while developing an inclusive play space. They have designed a fairly exhaustive manual that highlights the developmental importance of each play equipment along with the specification for the development of the product. The manual was developed in consultation with children and their parents about their view of play spaces. One of the most heartening aspects of the work, according to Mrs Kavitha Krishnamoorthy (in a telephonic conversation with the author), has been the shift in the attitudes of the government officials with whom they work in different districts. Government functionaries are keen to promote more inclusive spaces and they reach out on their own to the *Kilikili* group, without any persuasion. In a country where attitudes of infantilising, medicalising, pathologising, paternalising and remediation of children with disabilities are widespread, an explicit social acceptance of the state actors associated with the lives of children is indeed an indicator of slight progress towards social inclusion.

Given the mandates of inclusive schooling, existing schools may need to re-design their school playgrounds and classroom play settings in order to ensure the full participation of all children. New schools will need to be designed for inclusion at the initial stages itself. A preliminary analysis of the guidelines and manual developed by *Kilikili* for public playgrounds offers several lessons for creating inclusive play in the school settings. These include: First, having a shared vision of the values embedded in inclusion – reaffirming equity, access for varied abilities to thrive, develop capacities of independence and promote trust, empathy and compassion amongst 'all' in the school, which is a child-adult collective. Second, school principals and teachers need to understand the importance of socio-spatial inclusion and re-organise their school practices to improve the social and educational experiences of all children. Third, schools may use the UDL framework, which rests on the principles of planning for multiple means of engagement, action and expression, and of representation to ensure all learners learn within their socio-economic and cultural contexts. Fourth, schools to institutionalise accessibility and inclusiveness in all processes related to play. Fifth, encourage collaboration with community members and parents to nurture positive attitudes and sustain the vision of inclusion. Finally, schools need to include the voices and participation of children in designing the spaces that matter to them the most.

Looking ahead

India has come a long way in its pursuit of ensuring quality life and participation of children with disabilities. Inclusion as an educational practice is not formulaic. It responds to the contexts, culture and constraints of a particular setting. It is only in the willingness and persistence of collective action that inclusion can move out of the cloistered spaces of rhetoric. Some suggestions are offered at the level of policy, public awareness and engagement, schools, research, children and parent associations.

In most schools in India, designing a playground is an after-thought and a box to tick on the infrastructure parameters. However, it is clear from the preceding analysis that play spaces involve an interplay between the space, material, affect and social relationships. Hence, there is a need to develop guidelines for setting up inclusive play spaces aimed at socio-spatial inclusion. There are guidelines provided by the Government of India for setting up exclusive sporting centres for people with disabilities. A checklist, Making Schools Accessible to Children with Disabilities, has also been prepared jointly by UNICEF, *Samarthyam* and the Accessible India Campaign in 2016. Partnerships with organisations, such as *Kilikili* and *Gudgudee* that have the experience in setting up inclusive play spaces, could facilitate current and new schools in designing these. These organisations can also be engaged to train concerned state government officials in setting up such play spaces. Dissemination of the work of these organisations will also help replicate the work.

Public awareness and engagement about inclusion and inclusive play are imperative for bringing about changes in the attitudes of people. There are widespread assumptions that children with disabilities cannot play and need one-on-one support. These stereotypes are barriers to inclusion. In this context, print and digital media can present realistic portrayals of interactions between children with and without disabilities in play and school spaces and narrow the barriers to social participation through such efforts.

Participation of children in the design of inclusive play spaces is also critical. All actors associated with the design of inclusive play spaces must ensure that children's perspectives inform the design of their programmes and policies. Children with and without disabilities must also be encouraged to participate in awareness-raising campaigns. Children must play a significant role in the development of a strategy for inclusive play spaces in and around the school.

Importantly, pre-service and in-service teachers, school principals and government functionaries associated with the school system need to be educated about the importance of play in child development, education and the significance of inclusive play in education and social transformation. In many schools, play is taken out of the timetable and substituted for a school subject in order to 'complete syllabus'. For children with disabilities, free play time is often taken away for therapy or rehabilitation. Attitudes towards playtime as a pastime or a waste of time requires re-examination in school contexts. Research on the above-mentioned issues is also critical.

Collective action for advancing commitment towards an inclusive and peaceful society needs to be done with a sense of urgency. A befitting remark by Gulzar, poet-lyricist in the book *Ek Koshish: The Story of Arushi* (Mehta, 2020) encapsulates the determination required. The book captures the thirty-year journey of Arushi, a Bhopal-based organisation that works with children with disabilities. Gulzar observes, *'Do it now, while it is in your hands, for if it does not happen now, it may not happen for the next fifty years; every person who comes after, will think back, wonder why you did not do it and hesitate to take a decision; it will become a contentious issue.'* (p61) It is in the here and now that play for all can be realised.

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Play and Learning | Blurring the Boundaries

Sunita Singh

The diverse benefits of play, especially for young children, have been cited for decades (Barnett, 1990). Policy and curriculum recommendations over the years have focused on creating more learner-centred classroom transactions. The National Early Childhood Curriculum Framework (2013) makes a point for engaging young children in play-based learning. For children in the younger grades, play acquires a place of special significance. In fact, focus on the holistic development of students along with the encouragement of creativity and critical thinking (National Education Policy, 2020) makes it even more necessary for educators to develop deeper insights into principles of play-based strategies for implementation in classrooms. The implementation of play-based learning strategies for young children necessitates a well-planned curriculum and also well-prepared teachers to implement the same. In order to 'teach' young children, one also needs to know how children learn (UNICEF, 2018). This article will focus on the relationship of play with learning and also discuss some specific ways in which play can be used with young children across domains of development and areas of learning.

The context of play

In India, for a major part, the landscape of teaching and learning stands in almost stark contrast to how we conceptualise play-based learning. The reasons for these divergent practices can be many and often emanate from the conceptualisations of curricular practices and socio-economic and cultural contexts of education in the country. First, the textbook-centred pedagogy (Kumar, 1988), a prominent legacy of colonial times continues to dominate classroom transactions, even at the preschool levels. Second, perceptions of quality have become increasingly associated with formal ways of teaching even at the preschool level (Singh, 2019). Third, playway based transactions continue to be perceived as not leading to preparation for primary school (Singh, 2019), which is considered as one of the main goals of preschool. Fourth, time constraints in 'covering' the academic content leave little room for play-based strategies. These distinct, yet overlapping, factors have only propagated silos between play and learning. This is not to say that play has not been recognised and recommended as a strategy for young children, rather, the relationship between play and learning has not been understood adequately.

While the National Curriculum Frameworks (NCERT, 2005; The National Early Childhood Care and Education Framework, 2013) craft a direction towards constructivism and play-based pedagogies, the desired change in beliefs about pedagogy requires advocacy for teacher agency and autonomy and not only provisions of training, infrastructure and materials (Kaul & Sharma, 2017). Teachers' beliefs about teaching also flow from their own experiences, both personal and professional. These point to the need for activating teacher agency and autonomy and their participation in policymaking for the implementation of play-based strategies.

Play, learning and development

Play is critical for learning and development during the early childhood years. It has an impact on children's social, emotional, physical and cognitive development. Research on early learning and development indicates that supporting children in play contributes to their learning and development and does not have a negative impact (Bergen, 2002). It is, therefore, imperative to understand the specific benefits of play and the ways in which it can be implemented in classrooms. Maria Montessori, an Italian educator believed that play is a 'child's work', implying that children are learning when they are engaged in their day-to-day routines. When children play spontaneously, it provides them with opportunities to explore, experiment manipulate and engage in problem-solving activities, critical for knowledge construction (Early Childhood Education Curriculum Framework, 2013). Given the diversity in play across cultures in the Indian context, it would be especially enriching for the classroom to bring in some of these diversities of play into the curriculum.

In order to understand the relationship between play and learning, it is first necessary to examine the different types of play. Many kinds of play have been identified in the field, such as solitary play, parallel play, group play, functional play, constructive play, exploration, dramatic play, games-with-rules and so on (Rubin, 2001). For the purposes of understanding play-based learning, one can broadly identify two types of play—free play and guided play. *Free play* is typically child-directed and is an act that is enjoyable for the child and could be by oneself or in engagement with others. On the other hand, *guided play* refers to those activities that essentially involve child-directed joyful aspects of free play with the mediation of an adult and therefore, enables the child to extend his or her learning through this scaffolding (Weisberg, et al., 2016). Guided play, thus, involves the agency of young children and also the guidance from an adult. Thus, play can create and provide a context for children not only to explore their interests but also for the teacher to guide their learning to specific goals.

Pellegrini (2006) conducted a research study that indicated that elementary school students who engaged in free play during recess time were more attentive to their work when they returned to the classroom. The study results showed that these children, especially boys, performed better academically in reading and mathematics in comparison with children who did not play during recess. Thus, building on play-based strategies is important for teachers in a classroom because these could be used to teach the academic curriculum in developmentally and contextually appropriate ways. While guided play might be considered more suitable for classrooms, both types of play have benefits for teachers. It is important to understand the multiple dimensions of play and the ways in which it can be used in the classroom and also outside the classroom. The benefits of play cut across domains of development and learning.

Social, emotional and physical development

The diverse nature of play allows children to interact with their peers and engage with them. This engagement, especially for young children, is critical for the development of their social and emotional skills. In our current contexts, the shrinking spaces for physical play and the overuse of technology has heightened our awareness of the need for young children to go out and engage in physical play for their physical health and social engagement with peers. When children engage in physical play, it provides them with a physical release and 'may facilitate friendships and promote cooperative pro-social behaviours and attitudes' (Scott & Panksepp, 2003, p. 549). Children who are able to play with one another are also in the process of learning to work with one another. Play enables children to build relationships and friendships, learn to work and cooperate and resolve conflicts (Blasi & Hurwitz 2012, Pellegrini & Smith 1998). When children play with others, the process enables them to identify themselves vis-à-vis the context in which they are located and also enables them to establish a sense of self. This is because the process of play involves making various kinds of decisions and negotiating with their peers. Often, children's play also has rules of turn-taking, waiting, leading and so on, which can also empower them to become self-reliant and motivated learners.

Research by Ghafouri and Wien (2009) has provided evidence that child-directed play also enables children to co-construct a social-emotional bond with their peers that sustains their play. This kind of play is important for children to be able to understand and follow rules, negotiate and resolve conflicts, become aware and support the wellbeing of their peers. Children's play and its relationship with emotional development are well documented. While all kinds of play could provide opportunities for learning and development to young children, children use pretend play as an opportunity to learn and to address their feelings, develop empathy and balanced emotional health (Kwon & Yawkey, 2000). If the teacher and the school support the use of physical play on a regular basis, it provides a powerful model for young children to engage in play in their homes and communities also. This may, in turn, lessen the dependence on technology in the areas of play which is now shrinking playtime for young children.

Language and literacy development

Language and literacy are key modes for children to communicate with one another during play. Communication through language enables children to develop bonds, participate in dramatic play and also navigate through conflicts that may develop during play. Language empowers children to understand that their imagination can enable them to be anyone they want to be. Play contributes

to the development of representational as well as abstract thought processes (The National Early Childhood Care and Education Framework, 2013).

> The language and literacy context of our country presents to us two dimensions while discussing the relationship between language, literacy and play. The first is the rich linguistic tradition in the country and an acknowledgement of the diversity of the languages children bring into the classrooms. It is important to keep in mind that our spoken languages are strongly connected with our identities. Hence, it is critical to acknowledge and respect the languages young children bring into the classroom. Second, all our languages are replete with riddles, poems, songs etc, which can be used as resources in the class to engage young children in play.

Children's play and the development of emergent literacy skills are said to be strongly related (Christie & Enz, 1992). Young children's early attempts at using emergent literacy skills find representation in their use of rhyming games, making lists for shopping, pretend reading and so on (Bergen & Mauer, 2000). The researchers found that children who were able to engage in symbolic play in the classroom showed better abilities in reading and writing in the later grades. Toub et al. (2018) conducted two studies in which they examined the role of play in a programme developed for vocabulary intervention among 249 low-income preschool children. Book readings with toys were used as a strategy to present new vocabulary to children. In the first study, children were randomly grouped for free play, guided play and directed play. With the different levels of support from an adult, all children showed gains in the knowledge of vocabulary. Children in the two groups which had adult support gained the most. In the second study, classroom teachers worked with 101 children in place of researchers. The results of the study again indicated gains in receptive and expressive vocabulary. Thus, both studies clearly suggest the advantages of adult support in play-based activities for vocabulary development. In the Indian context, games that encourage the use of the bilingual and multilingual contexts of children can enable children to participate more in classroom processes.

Numeracy and spatial skills

A number of children's games involve numbers, addition, subtraction and so on. At street corners and playgrounds, we find children engaged in physical play and various kinds of manipulations with numbers. However, we also commonly find young children who have already developed a fear of mathematics. Therefore, the early grades are the time for understanding how young children conceptualise mathematical concepts and also for introducing the same in an engaging manner.

In a study, Seo and Ginsburg (2003) sought to explore young children's naturalistic exploration of mathematical concepts during free play time. The study was conducted with 90 low-income African American, Latino and White children in the age group of 4-5 years from different schools. After observing children over a period of time, the researchers found that children engaged in diverse types of activities which included classification, magnitude, enumeration, dynamics, pattern and shape and spatial relations.

A study by Fisher et al. (2013) with preschool children observed young children as they learned about geometry and shapes. The study was conducted with 70 children in the age group of 4-5 years across scenarios of guided play, free play, and didactic instruction. In the case of guided play, the adult scaffolded the interaction with the child. In the case of free play, children were free to interact with the shapes in whichever way they wished to. In direct instruction, the teacher led the instruction and the children sat and listened to her. The results of the study indicated that children's learning was the maximum in the guided play conditions in comparison with the other two scenarios.

In another study, Ramani and Siegler (2008) sought to understand how playing board games in the form of guided play with 124 preschool children from low-income backgrounds could foster knowledge of diverse numerical tasks. These tasks included numerical magnitude, number line estimation, number identification and counting. Preschool children engaged in the board games for four sessions, each of 15-20 minutes, with the researcher for two weeks and for another session nine weeks later. The researchers found that the gains remained consistent even after nine weeks of the study. Thus, there is ample evidence of ways in which mathematical concepts can be used in a play-based manner with young children in place of the typical paper-pencil measures common across many classrooms.

Conclusion

Changing times necessitate that the transaction of the curriculum in the classroom is one that engages young children, instead of following a one-size-fits-all approach. Many of our classrooms, even for the very young, continue to practise strategies heavily focused on rote learning and memorisation that do not enable children to understand the content of the instruction. In fact, these practices have seeped in so deeply that many stakeholders in the community now regard the filling up of worksheets by children as quality education.

We know that during the early years, children are in the process of understanding their contexts and responding to those in their unique and creative manner. The use of play-based strategies enables children to develop their creativity and critical thinking skills (NEP, 2020). Further, research evidence from diverse contexts has supported the use of play in classroom transactions. There is evidence of support for free play as well as guided play. It is necessary to examine the types of play and the benefits from them. If we want to enable children's learning and development through play – keeping a Vygotskian perspective of the zone of proximal development – play also needs to evolve across contexts and across classrooms. In order to bring in play-based approaches into the classrooms, it is essential to understand the existing research on play-based learning, create opportunities for in-service learning where teachers could exchange ideas on using these approaches, work with parents and communities to become familiar with the funds of knowledge in the communities and advocate for the same at the policy and curricular levels.

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Children Learn how to Learn Through Play

Divya B A

Sahana walked into my class on a Monday and called out to her friends. She was excited about trying out a new game with her classmates. She got the idea after visiting her favourite restaurant over the weekend. Sahana explained the plan to her peers, and everyone started looking for suitable objects that were required to set up a restaurant. Wooden logs became stools, planks turned into tables, our play kitchen turned into a restaurant workspace and the little chef made a hat for her using a dupatta. The chef asked her guests what they would like to eat. Spaghetti was ordered and a plate of *idli* for the baby (a doll). The little chef giggled and used some colourful yarn to make pesto spaghetti and wooden coasters became steamed *idlis*. The children had a great time playing the game; it was also a fantastic learning experience for them.

Importance of play

Children's play, in the creative, open-ended, imaginative sense, is now seriously endangered due to early intellectualisation or focus on academic work. Children are weighed down by academics and rote learning in a conventional classroom. They are confined to classroom environments in which they are forced to read, write and engage in activities that they are not ready for and are not age-appropriate. This makes them frustrated, drained out and disinterested which can, oftentimes, result in outbursts of suppressed energy and emotions and sometimes, they are labelled as 'hyperactive' or 'attention deficit'. On the other hand, children who learn through play and use unstructured play materials, display a range of creative ideas. They do not get bored with playing with the same open-ended play material and are able to use it in various ways to express their ingenuity and originality. They are also at ease when their mind is not engaged in play and are okay with being still and content with themselves. They are self-engaged, self-motivated, confident, creative, calm, expressive and have better attention spans.

For a primary school child (6-11 years), imagination is as important a medium for learning as make-believe play is for the pre-schooler. Through imagination and the art of storytelling, any subject can be taught and kindergarten (2-6 years) children become enthralled with learning. Without imagination, learning is not experiential and cannot be internalised. If a child has been allowed to engage in make-believe play during the kindergarten years to nurture imagination before entering grade I, he or she is then ready to learn. While individual children may have learning difficulties, their enthusiasm for learning and for overcoming difficulties is enormous.

The central importance of creative play in children's healthy development is well supported by decades of research. A study was done in the 1970s in Germany, at a time when many kindergartens were being transformed into academic rather than play-oriented environments. The study compared two groups in 50 kindergartens – one, in which children played more and another, a control group, in which children focused on early academics. The children were followed until grade IV and, at that point, the children from the play-oriented kindergartens excelled over their peers in conventional schools in every area measured—physical, emotional, social and intellectual development. The results were especially striking among lower-income children, who clearly benefited from the play-oriented approach. The overall results were so compelling that Germany switched all its kindergartens back to being play-oriented.[i] They have continued in this mode until the present time, just like schools in

Finland, which have recently become popular in the alternative education space.

The Waldorf Technique

The Waldorf Technique was an independent school movement developed in Europe a hundred years ago by an Austrian philosopher and visionary, Rudolf Steiner. This learning process is essentially threefold and engages thinking, feeling, and doing. Each child is taken through a methodology that integrates academics, arts and practical skills.[ii] The Waldorf pedagogy helps protect childhood by focusing on play as a form of learning in the early years.

At our *Tulasi Waldorf Kindergarten*, we have designed the space as an extension of the home environment and it includes activities that a child experiences in his or her house. Here children engage with everyday items like a play kitchen, handmade dolls, pebbles, pods from trees, dupattas, scarves, baskets, tents and other open-ended play materials. There is no specific goal that the child must achieve by playing with these toys. The focus is on an *Eat-Play-Sleep-Repeat* pattern with no emphasis on formal learning. The learning through such a technique can be immense.

Impact of play at various ages

To put things in perspective, let us see how play progresses from 2- 6 years. Children all over the world play similarly, irrespective of their culture and language. They speak in the common language of play.

Two- to three-year-olds: parallel play and imagination

Between two and three years of age, a child is interested in basic actions such as climbing, jumping and other such movements which help with balance and spatial orientation (also known as *vestibular sense*). These movements are exciting for children and they love to clamber over common objects such as furniture and windows, as they are curious and want to explore their world.

Three-year-olds typically engage in parallel play, which means they play on their own but like to imitate by playing with the same objects as their peers around them. They do not naturally socialise and play together, but just begin to interact with other children at this age. This may lead to small fights which will need to be sorted out by adults.

A three-year-old slips into imaginary play quickly and creates real-life scenarios based on observations from the surrounding environment or the stories that he or she hears. We have seen how children in

Playing with tree pods

the kindergarten like to wrap a dupatta around them to play the role of a mother/grandmother and cook with pretend kitchen utensils. Similarly, children love to play the role of a favourite character in a story they have heard, for example, wearing a cape and carrying a basket of food, similar to the story from *Red Riding Hood*. This kind of play shows that the images from stories or real life are internalised by them and expressed through the medium of play.

Four-year-olds: pretend play and manifestation of ideas

At four years of age, a child likes to observe other children and begins to socialise. Children enjoy playing together in groups, which allows them to both make a cohesive decision or engage in dissent. We can see the beginning of role play and pretend play. Children now also begin to develop the language to express their thoughts and ideas; they also exchange vocabulary and develop complex language. Pretend play enables a child to manifest something he has seen and experienced.

In our kindergarten, we played a game called *Let's Pretend.* A wooden log acted as a prompt to spark the children's imagination. They used wooden logs as musical instruments, imagining them to be drums, *tabla*, even a harmonium. One child held in hand a wooden rattle for a mic to mimic a performance on stage. What cannot be expressed through words can be conveyed through play.

Five-year-olds: role-play and consensual decision-making

Five-year-olds are more assertive in planning the games they want to play and choosing whom they want to play with. They are keen to make friends and may already be part of peer groups. Children take on various roles within the group: they could be leaders or followers. Some may choose to broker peace, while others may have conflicting opinions. The group will come together to develop imaginative scripts and engage in role-play. This is called dramatic play or socio-dramatic play, which is advanced and constantly adapts and shifts in keeping with the interests and ideas of children. This facilitates skills like joining a group, sharing and taking turns, role-playing and exploring different relationships (parent/child, brother/sister, doctor/patient) and negotiating with each other about what to do next.

Six-year-olds at the threshold of change and growth

At six, children are ready to take on the challenges of grade school. Their play typically takes on a more practical and project-oriented theme. It is important for six-year-old children to finish this developmental stage while still in kindergarten, even though they may seem ready to take on the world. At this age, children may express at home that they are 'bored' at school during playtime. Many parents will assume that this means that kindergarten is no longer meeting their needs or that they need to enrol their child in more structured extracurricular activities to challenge and stimulate them. This, however, can end up hindering the child's ability to finish this developmental stage by 'busying' her and pushing her to the next stage before she is truly ready. A child at this stage is facing new inner abilities that she is not quite sure how to master. At this age, it also helps to give children more practical work, like sweeping, gardening, simple sewing, folding laundry, cooking, washing and dusting both in kindergarten and at home. This allows them to work through this time of uncertainty and enter play again and work with a new vision.

Can play help children who transition from a conventional school?

Aarush joined our kindergarten at five years, after spending a year or more at a very popular preschool. Initially, he found it very difficult to play with unstructured materials and took a long time to adjust to the Waldorf philosophy. He would constantly look to the teacher for guidance and instruction to play or to do some activity and would not take any initiative on his own. Aarush would return home and complain that school was boring. At five years, as outlined earlier, a child usually blossoms into a happy and confident youngster, who can initiate play with pre-planned ideas. However, this child was not there yet as his transition was much slower. With some effort, we were able to turn things around by the end of the academic year.

For a young child, transitions can be particularly different as conventional education sticks to a rigid and strait-jacketed curriculum that leaves little or no time for play. Play is often restricted to a short duration of time and is structured and defined by the teacher. It is often considered the opposite of work, but in reality, play can be seen as the main opportunity for children to take risks without fear of failure.[iii] This opportunity is not provided in a mainstream classroom, where flights of creativity and mistakes made are not appreciated and the child is reprimanded and punished.

In summary

In my experience of working with children, families and teachers in various institutions that follow the Waldorf framework., I have observed one overwhelming similarity: *creative play is a central activity in the lives of healthy young children*. It helps children weave together all the elements of life as they experience it. It allows them to digest life and make it their own. It is an outlet for the fullness of their creativity and it is an absolutely critical part of their childhood. With creative play, children blossom and flourish; without it, they struggle to learn and develop holistically.

If there is one piece of advice I would offer parents and early childhood educators regarding play and early academics, it would be to relax and stop hurrying their children. Children have such deep reserves for growth and learning that with careful nurturing and holistic support most will succeed wonderfully. This is a hard message to convey, especially in India, with parents pushing their children to achieve results before they are ready for it and use technology at a very early stage, when it is more important for the child to *experience* and *understand* rather than be pushed into rote learning.

An important quality of being human is that it takes quite a long time for children to grow up and develop all the capacities that are a part of human nature. Compared to the young of other mammals, a human child takes much longer to mature. Our children deserve the right to grow and progress in a slow and sustained manner. This can only be achieved by allowing children the time to play and experience the world at their own pace.

**Names have been changed to protect children's identities.*

Endnotes

i Crisis in the Kindergarten - Why Children Need to Play in School by Edward Miller and Joan Almon

ii https://www.sunbridge.edu/about/waldorf-education/

iii https://www.sagepub.com/sites/default/files/upm-binaries/53567_ch_10.pdf

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A Level Playing Field for Children with Disabilities

Khushboo Singh

Harish, a 10-year-old child at our *Khushboo Special School*,[i] comes walking towards us, drawing our attention to his superman-themed mask. A child with cerebral palsy (CP) and intellectual disability, Harish, like all children, is eager to play, run and make conversations despite his lack of verbal skills. He shows patience as he waits for his turn. He even cheers his friends from the sidelines. Quick wins, high-fives and verbal praise motivate him to continue doing activities and not give up. This child, who used to be very quiet, had limited social interactions and needed physical support can today not only perform activities confidently but if asked to demonstrate instructions to his peers, does not shy away.

Inclusive play philosophy

Over the years, from personal experience and observations and time spent on the field, we realised that children with disabilities (CwDs), most often, had to forgo activities such as sports and games due to environmental constraints such as the absence of proper ramps, or attitudinal constraints, such as people's lack of awareness on how to engage with them or the mindset that they simply cannot play or may slow down the game or worse, injure themselves.

An estimated eight million children (aged under 19 years) live with some form of disability in India and only one in five CwDs plays sports. Over 70 percent of parents and schools have reported that a lack of opportunities for participation of CwDs has added to their social isolation and lack of confidence.

As part of our initial research, we visited various special and inclusive schools and observed these situations:

- Many special schools did not have a sports period or a sports teacher.
- Schools that did have a sports teacher did not involve CwDs in games and usually asked them to sit and watch.
- Most teachers limited play to basic ball catches, which became boring after a while. We realised that teachers lack the skills and knowledge to design activities and games as per children's needs.

The idea for *Umoya Sports*,[ii] originated from the singular belief that sports and play benefit all, equally. We celebrate the differences in our children and eliminate barriers to play, not just physical but also those of instruction and language; introducing adaptations within activities to make play more inclusive for all children.

At Umoya Sports, we have identified three specific challenges faced by CwDs. We refer to these as the 'Inclusive Education crisis':

- Lack of quality contextual programmes providing holistic development and skill development as per the disabilities and requirements for CwDs.
- Lack of social skills because of denial of participation due to social stigma and misconceptions about CwDs.
- Lack of physical activity and opportunities to engage in play/fitness, leading to physical and mental health challenges.

Our programme

To make our programme more child-centric, we modify activities depending on the skill and ability of each CwD. We use sensory balls, balls of various sizes or children's favourite toys in our activities. We change distances and rigour depending on the strength and stamina of a child. We let children invent their own games, which builds their creativity and problem-solving skills.

We also train teachers on the basics of modifying games, encourage them to shadow our sports mentors to understand how to deliver skill-appropriate activities. We give them lesson plans which they can implement later in their classrooms. Over time, this has helped in ensuring that all children participate in sports programmes.

Our work is essentially built on Adapted Physical Education (APE), which is 'the art and science of developing, implementing and monitoring a carefully designed physical education instructional programme for a learner with a disability.'

Based on the gaps we have identified, we follow a '3C' programme philosophy to build our annual sports and play-based education programme.

Curriculum

Our holistic sports and play-based education programmes are curated keeping in mind the needs of children with (both intellectual and locomotor) disabilities and developmental disorders and those without disabilities. The programme focuses on building foundational movement (developmental) skills in sports such as football, basketball and athletics and effective participation in society through developing life skills, such as problem-solving, critical thinking and social skills, such as teamwork, confidence, and empathy.

Over the years, we have observed and also received feedback from teachers that the children have higher retention and are also more focused in class after a sports or play session. One such story from the field is of Bittoo and his grit and cognitive development. He is one of our athletes who was very shy at the beginning and was hesitant to participate in sports. Over a period of only six months, he has not only begun to love to play football and waits eagerly for the sports sessions but his cognitive skills have also improved. Recently, he surprised us all by solving one side of the Rubik's Cube. There has been immense growth in his confidence and social skills and he now aims to solve the whole cube.

Coach

The role of a teacher or mentor is as important as a robust curriculum. We train young sports enthusiasts and physical educators as adapted sports mentors. We work closely with teachers and special educators in implementing the programme to lead a two-way learning process.

To showcase the role of a mentor in the life of a child, the story of Priyanka is a wonderful example. Priyanka is our athlete with autism spectrum disorder (ASD). She was quite temperamental and would only come to the playground with the teacher's support. She also engaged in play with the support of the teacher. Our team worked with her to understand her needs and her likes and made her feel comfortable, thereby creating a safe space for her. Over time, Priyanka started to love to play and now she performs activities independently with minimal support and takes charge of her own learning. She has started taking a liking to football and repeatedly asks for dribbling, one of her favourite drills with the ball.

Culture

Through our unique *Buddy* system, we build empathy and inclusion by bringing together children with and without disabilities to participate and play as a team. We pair a CwD with lower skills or advanced limitations with another child with or without a disability with higher skills to create an additional support system for children to encourage them to participate as *buddies*. We also provide positive reinforcement and an incentivised system to create a culture where every 'buddy pair' performing and showcasing best teamwork is rewarded with extra playtime.

We have observed how children started supporting each other not just on the field but also off it. This is an encouraging start to building an inclusive culture and an inclusive society. One such friendship is that of Dhruv's and Aman's, which gives us hope and belief in the power of change. Dhruv, an athlete who has CP, was often bullied by Aman and it was troubling him. We paired the two together in our *Buddy* system and created a structured approach with incentives for both of them. Over time, Dhruv not only built a friendship with Aman on the field but also off it. There has been an improvement in Dhruv's hand-eye coordination and confidence.

Over the years, through programme monitoring and evaluation, we have observed the following growth in our children:

- Empathy and mindset – 98 percent of our mainstream students have displayed empathy by signing up again for our inclusive programme.
- Growth over key developmental milestones - Our children have displayed a 42 percent improvement in coordination and agility and a 38 percent increase in their strength and stamina over the year.
- On average, 62 percent of the children show an increase of 1.5 points on a scale of 5 in their sports skills in football, basketball and athletics.
- Through our surveys, 85 percent of teachers have observed that children have displayed higher retention of academic skills, such as number and colour identification and recognition of objects of daily living.

Pandemic and the birth of Ability Spark

The moment we think of play and sports, visuals of the outdoors, playground and nature come to mind. So, when COVID upended our lives – lockdown and its restrictions, social distancing and the closing of schools – we found ourselves in uncharted territory. It is well known that lack of physical activity, more so among individuals with disabilities, can result in functional disorders, such as obesity, cardiac diseases, attention deficit, coordination disorder and lack of strength. Further, the sudden and unexpected alterations in the learning process during the lockdown increased the burden on children as well as their parents. A new kind of stability had to be reimagined.

The pandemic further exposed the challenges and, in a way, reiterated the need to work towards an inclusive education crisis which mandates the following:

- Inclusive and accessible teaching-learning materials (TLMs).
- Structured and adapted low-cost, play-based physical education programmes.

Keeping our children's wellbeing at the centre, we developed an online physical education programme integrated with early childhood education called *Ability Spark*, which focuses on physical and mental well-being and aims to minimise developmental losses and stress through play.

Ability Spark is an inclusive, digital-play and well-being programme with a focus on developing overall physical and mental fitness through yoga and fun outcome-based sports and physical education activities for CwDs in the age group of 3-14 years with limited or emergent development skills.

While thinking about how we could involve all children, we asked ourselves the question: How can we design physical activities and experiences which meet children at their level of skills? Our team of sports mentors curated various physical activities, breaking the developmental skills into smaller and achievable skills, suggesting adaptations that are not only fun but also intrinsically serve as the foundation for sports and exhibit the philosophy of Head-Heart-Hand.

The activities are adapted to fit the realities of homes, where resources might not be readily available. We provide an individualised approach and modified lessons for CwDs. Each activity comes with a peer-led video demonstration, lesson plan and visual cue cards. In the video, we have contextualised each activity to show its relevance to life and added visual stimulus and friendly voice reinforcements, such as, 'Give me a high-five!', 'C'mon you can do it!' to make the content friendly and relatable.

Piloting the programme first with parents and subsequently, in schools as a teacher-training model has given us an understanding of how PE can be delivered in an online setting. The programme enables teachers and parents with ready-to-use resources available at a single point, bringing play into everyday learning.

During this time when parents have become the primary educators, they were empowered with toolkits to continue their children's learning at home. Most importantly, it facilitated the continuity of a daily routine for a child, which is an important peg to assure that progress is made in the developmental skills domain.

Ms Priyanka Gangodia of Jai Vakeel School, Mumbai, shared this, 'Our teachers really appreciated the videos. They were quite easy to understand and simple to conduct. All the teachers feel that the activities did help them in their online classes and proved beneficial and helpful for our students to develop their skills. Teachers found gross motor activities to be very good for our students who have ASD.'

Our learnings

Shift of mindset through action

At the start of the programme, parents and teachers were sceptical and feared for the safety of their children and doubted their abilities. After

about six months of their children's participation in our programme, we invited parents and teachers to participate in our activities, such as coordinated jumps or basic ball activities, along with their children. A lot of times, the parents and other neuro-typical adults were unable to do the activity that their children could. This created a realisation among them to see and focus on the potential and abilities of CwDs rather than on their limitations.

Most of the schools and centres working towards the development of CwDs, focused only on the therapy model. A child would be part of many individual therapies – speech therapy, occupational therapy, physiotherapy, or writing. And though we understand the importance of these therapies, they can become tiresome for the child and can make the child feel bored or anxious. Sports and physical play are complementary and provide therapeutic benefits while engaging the child in enjoyable activities. Over the three years that we have worked with them, teachers from our partner schools are the biggest advocates of sports and encourage children to participate in sports.

Importance of socio-emotional and physical wellbeing through play

Children have a natural inclination for play. Physical activities, whether online or on-ground are fun. Even the pre-work to every activity, like organising objects, measuring distance and studying the space becomes fun for children and builds their excitement. In the process of organising resources for the activities, a parent remarked, 'My child has become more aware of the surroundings; this to him is like going on a treasure hunt.'

Role of sports and play in Inclusive Education

As outlined in the NEP (National Education Policy) 2020, sports integration is another cross-curricular pedagogical approach that utilises physical activities, including sports, games and movement in pedagogical practices to help in developing skills such as collaborations, self-initiative, discipline, teamwork, responsibility etc.

Designing programmes with inclusion as an underlining and binding theme is to help develop a climate of acceptance and understanding so that all individuals get the opportunity to be physically active in schools and communities. Through our programmes, we reduce barriers by enabling a change in attitudes in non-disabled children towards those with disabilities and, at the same time, empowering CwDs with confidence and physical agility through disability simulation exercises.

We envision that our programmes supporting teachers, parents and caregivers will create a change of mindset, build their knowledge and skills to help introduce virtues of play and sports as hands-on learning and support them in nurturing an inclusive culture.

Our children like Aditya and Soni fill us with extreme hope and joy and are a source of inspiration to other students. Both these students with intellectual disabilities from our partner school (Khushboo Welfare Society) were selected for the National Floorball Camp conducted by *Special Olympics Bharat* and got the opportunity to be part of the Indian National Team.

**Names have been changed to protect children's identities.*

Acknowledgements

The author wishes to thank Aditya KV, Founder, Umoya Sports, for his guidance, inputs and help with co-authoring this article. Aditya founded Umoya Sports with an aim to leverage the power of sports and education to develop life skills among students with disabilities.

Endnotes

i Khushboo Welfare Society, set up in 1995, is an NGO based in Gurugram, Haryana. It provides multifarious services for the development, education and rehabilitation of children, adolescents and young adults with mental and multiple disabilities.

ii Umoya Sports is a for-impact, non-profit based in New Delhi. It works towards providing holistic development to children with and without disabilities by equipping them with life skills needed to lead an enriching life and build an inclusive culture in schools and communities through sports and play-based education programmes.

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Dramatic Play and Language Development

Meghana Baasri

Play has a significant effect on the development of a child's home language (first language or L1). It integrates mental and physical activities in a meaningful manner and is fun, interesting, and engaging for the child. Play often involves private speech (in children aged between 2-7 years, in L1), more commonly known as 'self-talk', which leads to the development of language skills. As a child engages himself/ herself in play, he/ she uses private speech to regulate his/her behaviour. Over time, private speech manifests as thoughts. In the process, the learner also has ample opportunities to practice his/her receptive and expressive skills. As children grow up, the language they use in their pretend play also evolves to a level where not only can they describe their actions, but also the play scenario and roles which enables counterfactual thinking in them.

Even in the initial years, a child becomes familiar with words by engaging with books and other material that have letters/printed text on them. Throughout his/her school years, the child is constantly developing his/her language skills through play (Seefeldt, 2001). For example, when a child plays *House*, he/she interacts with playmates, an important factor that contributes to language development. Dramatic play, when planned carefully with coordinated activities, promotes active learning in children.

Dramatic play and first language

Growing up, I often played with my younger brother and a cousin. One of our favourite games was playing *House* in the afternoon when all the adults were resting. Inevitably, every time, I would assume the role of the mother and my brother and cousin, both two and a half years younger than me, would assume the roles of the children in the family. Each play session, though the roles we assumed were the same, the situation would be different, something we discussed and developed before engaging in the play. We spoke in L1, and I distinctly remember many instances where I imitated the behaviours of my grandmother, mother and aunt, my immediate role models. We used household items, like newspapers, notebooks, and utensils from the kitchen to make our play-acting more authentic.

This is one example of spontaneous, dramatic play. Dramatic play often allows children to experiment with purposes/instances that lead to literacy development. In the above example, I often pretended to read the newspaper, as my aunt did every morning with her coffee. My brother and cousin used our nursery class notebooks (used for practising to write numbers and alphabets in our respective classes) to pretend to do homework, which I would oversee (as the 'mother'). All these aspects significantly contribute to a child's language development. The dialogues in the play, while starting from imitation of role models, soon morphs into creative expressions that are rooted in the child's experiences and observations. The more the children experiment with the language, the more comfortable and confident they become in expressing themselves freely. Often, these creative expressions also help playmates learn from one another.

Similar role plays can be organised in the classroom by the teacher on familiar stories. This has been done by several teachers using stories from the English kit provided to the MGML (multi-grade, multi-level) classes I to III in Karnataka. A teacher involved some of the students, made props and worked with the learners to adapt to the roles of the characters in a story called, *The Fat King*. In the event that the students forgot the rehearsed speech, they often ad-libbed the lines from the story they recalled, in a mix of L1 and L2 (second language). Overall, the whole class was motivated and engaged in the roles and their interactions with each other in their various roles. The scope for creative expression allowed by the teacher not only encourages children to participate in the role play but also helps them learn to react/respond to situations that are unexpected. Such instances of play planned by the teacher build communicative confidence and competence in the learners – an important skill that many learners in the locations where we work lack.

In their paper, Mielonen & Paterson (2009) have stated that the language that children used during their play was like the language they would use when they start to read and write. The researchers conclusively stated that the children who engaged in dramatic play used language to develop scripts (for play), combining the skills of reading and writing with play. Practising these skills allows learners to transfer their skills and knowledge to reading and comprehending texts in school.

Second language development

In another class I classroom, students in the English medium section, left alone in the classroom when the teacher had to suddenly step out for something, a student seized the opportunity to play the role of the teacher in the class. I watched silently as the girl adjusted her dress (as her teacher would adjust her sari) and then picked up the stick to point at the board and began to ask the other students to identify the alphabets being introduced in the class by their teacher. The rest of the students corrected the incorrect responses of the girl posing as the teacher and engaged in this small game with her. The seamless stepping into the role of the teacher by the 6-year-old girl is an example of spontaneous play in the classroom.

For the learners in this above scenario, English is their L2. The learners come from various backgrounds and their L1 ranges from Kannada and Telugu to Lambani and Urdu. Many of them were still in their silent periods (a timeframe during which learners are actively processing the language they hear and see around them, but do not produce/speak it), yet they engaged in English with the 6-year-old girl as much as they could. Engaging in this short activity, many students had the opportunity to revise the letters (with the help of their classmates) before the teacher returned to resume the lesson and practise the few English expressions they had learnt in class. The children engaging in this game not only have scope for stepping into adult roles and practising vocabulary but also develop and practice creative expressions. When the 6-year-old girl gets a response from her classmates that is unanticipated, she automatically goes through her experiences and knowledge to find a new expression that she finds acceptable in the scenario being played out. The response of her playmates to her creative expression may also lead to further exploration of language and expression within the parameters of their game and boosting her communicative competence.

In most schools in Karnataka, English is the second language/L2. Yet, many learners in the smaller towns and villages have little to no exposure to the language. The classroom is the only space for them to hear and use English and the English teacher is their only source for aural input. Dramatic play in the L2 classroom can go a long way in helping the learners engage more actively with English and gain more confidence and motivation to learn the language.

In another instance, a teacher worked with her grade I students to set up a market. Each student had one stall in the market, where they had a range of items to sell. The learners were scaffolded through the process of using English to name their products and then inform the buyers of the prices of each item. The whole activity became one of play for the learners. Each student would visit other stalls and 'buy' other products and items and, after a while, they would engage in the process of 'selling' their own items to the other shop owners who visited their stalls. The teacher had the students bring in props from their homes, like small articles of clothing, rubber bands, hair clips, and toy cars, that were put on display in the stalls. The whole activity was planned by the teacher to help the learners become more comfortable in speaking in English and gain more exposure to the language. Once the learners had become comfortable with the whole game, the teacher invited the parents of all the students in her class for a demonstration. This time, the parents were the visitors/buyers of the many products the children were selling.

On this day, I witnessed even the quieter students confidently speak with every person who visited their stalls. There were many instances where the students forgot the rehearsed dialogues and had to come up with impromptu dialogues. These unplanned dialogues were, no doubt, based on their own observations of visits to the store with their parents or siblings. Often, these dialogues were delivered in a mix of L1 and L2 (English), but they were confidently delivered in almost every instance. The comfort of the learners in using English and in their creative expression was a direct result of the sustained exposure to the play activity and the roles the learners were assigned. This sustained exposure also resulted in the learners making modifications to the dialogues that came with their role.

The combining of verbal and non-verbal communication in dramatic play activities can help

many students better understand the play scenario, roles and dialogues involved. More importantly, the play activity helps shift the focus of the L2 learners from speaking 'correctly' to speaking confidently. This shift in focus is an important development in L2 learners since many of the children hesitate to experiment with a language that is largely unfamiliar to them, despite their English lessons in school.

Role of the teacher

What the government schools need now is to enable teachers to facilitate play processes at all levels in their classrooms, so as to help the students step into different roles, wield language in familiar settings, develop diverse play scenarios and plan roles for play for themselves. Learning through play is not limited to primary school and can be an effective learning tool in the higher primary classes as well. Methodically planned play (using various types of language games and activities) can be used to develop the LSRW (Listening, Speaking, Reading and Writing) skills of learners at all levels of L1 and L2. Perhaps the serious lack of age-appropriate skills in the learners in government schools can be more effectively developed using play as the mode through which content is delivered to build language skills effectively in the learners.

Even though play is largely self-initiated by the learner, the learning through play is enhanced when the teacher facilitates the process. A teacher's intervention during play takes on many possibilities – from assisting learners with problem-solving and questioning, to redirecting undesired behaviours. The teacher also needs to teach play skills to children who have difficulty engaging in a play scenario. Often, the intervention of an adult helps children transition from toy-oriented play to people-oriented play. It is with this transition that children begin adopting roles in their games.

The teacher should plan play activities with specific outcomes in mind. Objectives developed from the observation of learners should mould the play experiences of the learners as well to enable the developmental progress to a higher level. The teacher should individualise the play experiences based on the physical, cognitive, emotional, social, and language levels of the learners. For a learner who has difficulty engaging in play, the teacher should simplify roles so that they are straightforward and familiar to the child. But for a learner who is more communicatively competent, more complex roles can be planned and assigned.

Many issues faced by learners in the L1 and L2 classroom can be addressed through dramatic play carefully constructed by the teacher – from hesitancy to speak to the fostering of creativity in the learners. The exploration of the various possibilities of using dramatic play in the classroom can open up a host of options for teachers to liven up the language classroom and promote active learning in their students.

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The Fun of Learning and Learning Through Fun

Mukesh Malviya

As a teacher, I have long heard and understood the arguments in favour of learning through play in primary grades. But in most of these views, the examination of the why and how of this has been sparse. In this article, I will try to elaborate on what I have understood about learning through play and how I have adopted this idea. My experience as a primary school teacher has been shaped by my understanding as part of *Eklavya's* primary education programme, *Prashika*.

Why learn through play in early grades?

Children's learning status in primary grades is shrouded in questions. As soon as they enter school, children who have constantly intervened, interacted with and understood the world around them are suddenly labelled as laggards or ones who cannot learn. The method of teaching in schools differs vastly from the teaching-learning process the children are familiar with. In this teaching-learning process, they are *addressed* but not *included* (or are inadequately and infrequently included).

> In the primary grades, children learn and expand on skills such as comprehension, reading and writing, observation, expression of thoughts, calculations and so on. The learning of these skills is only possible by being involved. Acquiring these through a teacher's explanations alone often becomes a meaningless, absurd, arduous, and afflictive task for children. Simply repeating what the teacher says may ensure that teaching takes place, but it does not ensure that learning does.

According to my understanding, these skills can only be learnt well when the learner gets the opportunity to utilise her own understanding. This learning should be posed as a challenge such that the learners spontaneously and inevitably accept it. This means that this process should appeal to them. Their participation in this process should give them a sense of either gaining or of missing out on something.

The learning environment in school should be such that children can utilise their innate potential to accept and participate in the challenge (of learning) and, subsequently, present their individual understanding and take delight in doing so. A process such as this is what we call play-learning, activity, or praxis.

Understanding 'learning through play'

What is learning through play? What are its qualities? What can be learnt through them? Learning through play and activities may involve all aspects of play, but they have one hidden objective which we may call an 'educational objective' or 'formal-schooling objective'. Play and activities may be of two types:

1. Those that involve both physical mobility and mental capacity (the use of one's thinking).
2. Those that involve no (or next to none) physical mobility and only involve the mental capacity.

Both these kinds of activities require group or individual involvement. A key element in these activities is, 'let every child be involved'. Involvement means that every child should get an equal opportunity to participate in an ongoing activity or dialogue and this should be followed unequivocally.

Activity 1

In a class, children are sitting in a circle. They are engaged in an activity in which each child has to name a tall and a round object. This is being played with the help of a ball and a song. Children were singing *'Kya hai lamba, kya hai gol, jaldi bol jaldi bol'* (what is tall, what is round, say it quickly). The ball is thrown around and this jingle is repeated. Whoever gets the ball must name one tall and one round object. The name of the objects cannot be repeated. Since the ball could come to anyone, the children should have already thought of their responses. However, they have to constantly think of new objects because those that they may have thought of, may be named by another before them.

By analysing this activity, one can see that each

child involved in it is deeply engaged in the process of thinking. Each child is raking through her/his memory in an effort to identify objects that possess the quality of being tall or round. These two qualities do not exist as distinct identities, except as ideas of 'tall-ness' and 'round-ness'. In this activity, children also establish reasons for their choice of objects. For example, a child named a 'pot' as being a round object. When other children interjected that it is also a tall object, the child replied that it has round parts. The teacher lists all the round and tall objects that had been named on the blackboard. Then, looking at the list, the teacher talks to the children about their reasons for identifying something as tall or round.

Often, a play or activity has more than one skill integrated into it. However, a teacher should keep a specific skill in mind during play or while carrying out an activity. The objective of the above activity is not to make children identify tall and round objects. They already possess that knowledge. The objective is to lead children towards grouping or classifying objects based on certain qualities or identities.

Activity 2

In a class of children who are still learning to read and write, the teacher instructs each child to go outside the class and fetch any two objects from the surroundings. After a while, children bring back some objects with them. The teacher makes a table on the blackboard which has three columns: name of the object, its colour and the place it was found.

Then, the teacher instructs the children to give these details about the object each has brought. Children give these details, and the teacher notes these down in the table on the blackboard. While writing this down, the teacher keeps pointing to where the name, colour and the place it was found are being noted. In this way, when the table is completed, all objects that the children brought are collected in one place. Now, the teacher points towards the written text and reads the entire table aloud. Then, one by one, the children are called to the blackboard to point out the place where the name of their object is written. They also have to show where the colour and place it was found has been noted. Then, the teacher makes pairs of children, and each pair has to identify each other's object on the blackboard and read it aloud. After this, the teacher tells them that she would read aloud the name of the place where an object was found and the students have to tell the name of the object and where it is written on the blackboard.

Though the teacher was teaching how to identify and read the written text in this activity, organising information in a table and understanding a table were also objectives of this activity.

If we examine the two activities mentioned, we can say the following about activities/ learning through play:

- A fragment of some of the concepts/abilities used in the activity was already present in the children.
- During the activity, each child is challenged to apply her own thinking and understanding.
- While participating in an activity, a child receives direct feedback from her peers, which brings clarity to the understanding of that concept.
- This process generates enthusiasm which will boost students' confidence to accept such challenges readily.

Making play relevant for teachers

Understanding children's learning process

Children learn many things at home, such as household chores, some games, putting on 'good' behaviour when meeting a visitor at home or in a new environment. Analysing these examples makes one understand some of the basic principles of a child's learning process. For example, on seeing my mother make *roti*, I felt like making *roti* myself. When I insisted, my mother gave me the task of making the last two *rotis* of the day. Every day, while waiting to make the last *roti*, I would carefully watch the way my mother would roll the *roti* into a perfect round. But when I tried to roll the *roti*, it would stick on the rolling pin. My *roti* would not form into a perfect disc. It would be too thick in the middle and too thin on the sides. But I refused to concede defeat. Under my mother's instructions, coupled with my own practice, I learnt how to roll a perfectly round *roti* in two weeks.

If I analyse the process of my learning how to make a *roti*, I find that the process of learning included observing and understanding, using that understanding, repeating this process, being responsible, being involved, thinking of and creating new ways, accepting the challenge, showing enthusiasm to learn, showing eagerness, daring, being happy and trying again and again. These are the factors that must form the basis for weaving learning through play in children's formal schooling.

Having foundational understanding of the subject

I was able to interweave learning through play with the teaching-learning process because I was able to understand the abilities the subject being taught develops in the children. Language, environmental science, mathematics and science cannot be taught to children in the same way. I came to understand that language is for children to express their original ideas in speech and writing. There were opportunities in my teaching where children expressed their own experiences on an issue.

I created activities in which children would come up with words associated with a certain subject. While teaching environmental studies, I had to take a step back and think whether it would be appropriate to just narrate the sources of water to children or send them to the village to explore and find out how many hand pumps and wells there are in the village and where they are located. In mathematics, I knew that achieving the ability to count meant the ability to find the quantity of an object in a group. For this, I created activities that would require children to count.

Understanding a subject is an issue that requires comprehensive deliberation. Education officers and academicians agree with the ideology of learning through play, but they are used to looking at the idea and explaining it within such a narrow scope that they treat the subject through the lens of purism or as a grammar or rule book. This thought-epidemic reaches the teachers too. The water-tight compartments of subjects need to be opened in the early grades, only then will learning through play become a part of the teaching-learning process.

Teacher's involvement in creating and participating in play

If teachers have not been involved in play and activity themselves, their faith in learning through play remains weak. In the Prashika programme, we created and played many activities during teacher training sessions. Let me introduce you to some of them for reference here.

All teachers sat down in a circle. We were given words which we had to use in sentences. Each teacher had to make a different sentence. For example, for the word 'chair', the first few sentences were utility-based, like 'A chair is used for sitting', 'Chairs are made of wood, metal, or plastic', 'A chair has four legs'. But as the activity progressed, more imaginative and experiential sentences came up. The challenge of making new sentences arises from the need to use the word in a completely new way. When we were pushed towards thinking of novel sentences, we made new and original sentences. A new language began evolving within us.

The next stage of this activity was to make a sentence using two different words, like, 'chair' and 'sky'. Now everyone had to take turns to make a sentence that used both the words in relation to one another. 'I will sit on a chair as high as the sky', 'God is sitting on sky's chair', 'The sky is for flying, what use does it have for a chair', were some of the sentences made by the teachers. During this activity, we used the creative feature (productive design feature) of language spontaneously. Appreciation for a novel sentence and the creative experiment itself lent this game a feeling of joy and fun.

Another activity was related to mathematics – the understanding of numbers. The teachers were divided into two groups. One group chose a number between 1 and 100. The other group had to guess this number by asking only yes or no questions, such as, Is this number greater than fifty? Is the tens place value of the number greater than two? In this way, the other group had to arrive at the answer using as few questions as possible.

After playing it a few times, we realised how the questions could be framed better. A teacher suggested that the first question could be, 'Is the number smaller than fifty?'

If the answer to this question was a 'no', it meant we could exclude the entire range of numbers from 1-49. This was a really good question which was later repeated as the first question in many rounds of the game. We then learnt to frame the next questions in such a way that the scope of possible answers (numbers) gets narrower. We began considering all identities/properties a number can possess, such as place value, greater than, lesser than, divisibility etc.

We felt and experienced the joy of learning through these activities. In participating in these, we were able to let go of our inhibitions. We learnt new skills through these activities ourselves, such as making poems and stories, acting, novel ways to expressing oneself, experimenting, conducting surveys, understanding numbers in a new sense and so on. We were able to use these games and activities that we had learnt and the experiences we had gained with the children in our schools because we had personally felt the joy and sense of

accomplishment in learning.

Activities in textbooks

An ideal approach towards learning in the early grades to have textbooks in which each lesson calls for an activity. But in the absence of these, teachers need to get familiarised with a lot of activities. Primary school teachers should have a treasure trove of activities through which children can learn. I am mentioning a few activities that we prepared and adopted with children during *Prashika*.

1. Extending a story, making a story from words given, changing a character in a story.
2. Extending a poem or song: *'Hum to so rahe the, humein murge ne jagaya, bola...', 'Hum to so rahe the, humein billi ne jagaya, boli...'.* Each time this line is repeated, a new object is added to it.
3. Chinese whispers.
4. Drawing a picture while blindfolded.
5. Creating a picture from any given shape such as half a circle, diagonal line, triangle etc.
6. Making objects from clay.
7. Stamping figures using cut slices of potatoes, ladies' fingers etc.
8. Doing simple experiments such as pouring coins in a glass filled with water, observing solubility, rolling objects etc.
9. *Ek jaise, alag-alag* (what is similar, what is different)
10. Walking by following a map.

It is my belief that teachers will be able to implement play and activities in the classroom spontaneously only when they keep an open mind for learning about how children learn, when they have an amicable disposition that believes in children's rationality, when they not only have an understanding of a subject but have acquired for themselves a new meaning of the subject which is free from stereotypes.

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Play and Learning | Successes and Challenges

Ramakrishna Bhat

We often hear a mother saying how playful her child is. There is a glow on her face for this rightful joy. Teachers too when they talk about their favourite students, mention them as being 'very active'. Yet, do we, in general, perceive children's playfulness as a characteristic of active learning? The fact is that play, and various activities, are essential means of effective learning. Being active is enjoyable because the emotional stimulus is spurred by it. Every child is inherently active, playful and continuously learning unless parents, society or the school environment puts constraints on them.

When it comes to the classroom, play is designed for joyful learning. But do we find learning designs made for children based on this understanding despite the fact that concepts of active and activity-based teaching-learning have been advocated for a long time? Before going into the reasons for it not being taken up readily and widely as a classroom strategy, I am presenting two instances of teachers in two different parts of the country who are successfully adopting playful learning processes in their classrooms.

Success stories

I visited a government upper primary school in the Kannur district of Kerala when the state was in the process of adopting the principles of NCF 2005 in its schools. One lady teacher of class VI took her students to the playground during the maths period. She divided the class into two groups – one group of boys and girls to race on a 500-meter track and another group of students to mark their timings with stopwatches, pen and paper. Each child had something to do.

Once the set tasks were completed (in about 10 minutes), they returned to the classroom and sat on the floor in their groups. The teacher announced the timing of each of the eight runners (in minutes and seconds) and asked the students to first write down the data in ascending and descending orders, then find the cumulative and average timings. The teacher gave them clear instructions. The students were disciplined in how they followed instructions diligently, clearly demonstrating that they were accustomed to such activities. All the tasks were completed in a 40-minute learning cycle.

The teacher had many 'how' questions – How was the run? How was the noting of timings? How did you understand the process of ascending, descending and average time, etc.? This led to a reflection on their feelings, experiences and learning. The students thoughtfully articulated their responses.

This Kerala school teacher mentioned three things that made this exercise successful:

a. Accustoming children to a discipline of playful learning
b. Teacher encouraging and facilitating the task smoothly besides giving clear instructions
c. The spirit of teamwork among the students

I think it is important that the teacher led the students to interact and reflect on the learning. It made the students enjoy the thinking aspect too. It is a necessary teaching skill that worked well in this instance. Competition, which students are usually nudged into, to perform better in the traditional school system, would kill the spirit of learning in such situations. Here, the consecutive timings of the run helped students to visualise ascending and descending orders. The running of students one after the other provided them with visual pictures of an abstract concept.

In another school in the Hassan district of Karnataka, I met a teacher who was conducting a game with class III students during class hours. She would call the students one by one and blindfold them. The student had to then identify five students based on some clues, such as the sound of their voices. The children had fun and were excited. The teacher said that she would lead the children in discussing the senses of 'listening' and 'touching' after this and cover the related content from the text. She had also prepared activities around 'seeing' and 'tasting' for her students as home and project work for self-exploration.

The game in class provided children with concrete

experiences of their senses. If the teacher handholds with the *why* and *how* questions, children will start articulating their experiences without hesitation. Play and activities are a sure means of students' language development. It is important to note here that one of the most important aspects of a child's growth is the harmony between body and mind. The mind evolves through a child's bodily engagements. If children are not allowed to play, they are robbed of their natural growth and the nuances of language development. Body and feelings through the body, contribute immensely to language development.

Deterrents to designing play as learning tools

What is the reason that we do not see the playfulness of children being used as a means of designing learning on a wide scale across classes and schools?

Teacher-centric teaching

Teachers do not see the rationale behind play as a tool for classroom or textbook learning. In most cases, teachers view play activities as a means of entertainment. When it comes to learning, they see play as an unwarranted diversion. This is the result of teacher-centric teaching and learning that has existed for ages. Teachers need a conceptual understanding of playful learning to realise its impact and then, visualise its practice in their teaching.

When it comes to specific learning outcomes, even if the learning happens naturally, leading to reflections is necessary, whereby, the students achieve desired outcomes. This leading of students to reflect is evident in both the cases above. Asking questions to make children reflect on their own is a skill and it is a higher level of facilitation. It is easy to acquire once a teacher sees through it. But, in general, we do not find teachers using leading questions with their students. They are habituated to give ready answers that are lifted straight from the textbooks.

Societal outlook

School-going children are often denied the freedom to play at home. For the larger parental community and society, the school stands for textbooks and learning for reading them. They know little about the mental processes of a child's growth and how play contributes immensely to children's language and sociability.

During play, children are emotionally awake and open to positive suggestions. Parents even dissuade school-going children from doing household chores because they relate children's future to their success in our present-day school system. This attitude curtails children's natural growth and interferes with their freedom to explore. It is here that school teachers have an opportunity for engaging in meaningful community service, that is, making the parent community and society aware of the importance of play and freedom.

Space constraints

I came across a Nali Kali teacher in Bellary (Karnataka) during our online engagements. Later, I visited her classroom. After our online discussions about play as pedagogy, she wanted to implement it in her class. However, she was hesitant about managing children and engaging them in learning through play in a class of 70 plus students! Since there was insufficient space in the classroom, moving children in any way inside was a problem. To take them outside in the open was also not a possibility as the compound was small and it would disturb the other classes. She also did not think it safe to take the big group to any open space outside in a thickly populated village surrounded by two-crop paddy fields. I too could not suggest a way out to her at that time and requested her to think of storytelling, role plays, engaging in situational conversations, etc.

In many other schools, it is not just a question of a lack of physical space. Either classrooms are unorganised or unused articles are dumped in them; where sufficient grounds exist; they are not maintained and are not clean or safe for children. The whole situation appears like a self-imposed constraint for activity-based learning. In many schools, teachers find it risky to take children outside to the playground or to open spaces outside school areas. This is also a cultural issue that most teachers and parents see only the classroom as the right place for learning.

Student diversity

Diversity among government school children in terms of attitudes, behaviours, backgrounds and experiences appears problematic for many teachers. They express how challenging it is to discipline students without force. So, engaging them in learning through play does seem like a far-fetched idea to them. But if student diversity can be seen as a resource and their natural and sundry engagements as processes of learning, things can change.

Each child would have a place of dignity and self-worth if teachers start respecting their backgrounds, challenging circumstances and capabilities and design learning based on play out of those. This is where the teacher in Kerala has started to succeed and the teacher in Hassan was about to find a breakthrough and what the teacher in Bellary is keen to do. They are all thinking of how to provide children with the necessary freedom to explore.

Conclusion

The fact is that play is a natural way of engaging children in real learning. I conclude with three important aspects of play that must be kept in mind:

- It would be best if learning is designed on children's natural home or village activities, situations and existing experiences and is worked through these for expected competencies and learning outcomes. There is almost a total lack of awareness among the larger teacher community regarding this despite suggestions in textbooks to undertake some pre-activities and build pre-knowledge connections during classroom learning. Those teachers who do attempt this, mostly limit this to the previous class textbook knowledge (memorised and not related to their students' life experiences) and some superficial pre-activity.
- Playing needs to be seen as a means for learning that is inherent and natural for children. Play is a tool for learning and a child's natural will to learn would adapt to play with no hiccups. But care should be taken to see that the play involved is appropriate for the learning content, for the child's age and the individual child's inclinations.
- It would succeed when competition is seen by teachers as a deterrent to playful learning, teamwork, mutual learning, and natural relationships among children. Hence, situations or attitudes leading to competition need to be deftly avoided by teachers. The spirit of play should be participation, reflection and mutual learning. Relationships among children will be robust when the teacher establishes learning relationships among them.

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Indoor Games to Reinforce Learning

Akshatha S Belludi

During this pandemic, when most of our children are not able to attend school and online classes are not the solution to reach a majority of them, indoor games can prove to be an effective means for not just learning but also to build various cognitive and emotional skills.

This article looks at a few such games which can be introduced to children to help reduce their screen time as well as achieve various learning outcomes. Though these games are designed to be played in a specific way, following certain rules, these are only as limited as a child's imagination or the teacher's creativity. Blocks of *Jenga* can be used to make a building, a puzzle can be converted to a beautiful story and dominoes into a long train.

Many of these games can be developed using low-cost materials. Our teachers are doing this and using these games to reinforce learning in their students.

Indoor games developed by teachers

One of our proactive teachers, Ms Jayamma, has developed several games using low-cost materials that can be sourced easily.

Match numbers to balls

In this board game, students have to match the number of thermocol balls which are fixed on the board with number caps which are to be screwed onto the bottles.

In her words, 'I have designed this game to help my student practise counting using concrete materials as well as to help them exercise their fingers so as to develop the grip for writing.' She goes on to explain why she develops such games, 'I keep developing these games as teaching aids because they make my work easier by keeping my children engaged and lead to reinforcement of what they have learnt without the need of me being with them.'

Learning outcomes that can be achieved through this game include:

- Associating objects with numbers
- Understanding the concept of zero
- Developing vocabulary (by explaining observations)
- Counting of numbers from 1 to 10

Puzzles

Puzzles are excellent tools for developing fine motor, problem-solving and sorting skills. Jayamma teacher examines branded puzzles sold in the market and creates her own version using low-cost materials. These can be effectively used to promote talk, develop vocabulary and help children think. Children can also be motivated to create stories around these puzzles.

Dominoes

A regular game of dominoes has rectangular tiles and the back of the tiles in a set is indistinguishable, either blank or has some

common design. Instead of the dots, pictures that can be matched can be printed on these tiles. This game can be played by an individual player or a group of three to four players.

Jayamma teacher made dominos using waste packing material from our TLC. Similarly, characters from the English *Nali Kali* series can be printed on these dominoes. Skills of matching and sorting along with vocabulary can be effectively developed using this game.

Let's go fishing

In this game, the children have to pick the fish which has the word that their teacher or friend calls out. Whoever is able to pick the maximum number of fish, is the winner. Jayamma teacher has used magnets on the cards to make this game more interesting. The magnets have been taken from used remote-control cars that she has collected from her students.

Who fills first

Another teacher, Ms Annamma, has developed a board game to help her students practise counting. This game is played by two students sitting opposite each other. They throw dice or *kavade* (cowrie shells) by turns and fill the boxes with the corresponding number of counters. The counter can be seeds or stones. Whoever succeeds in filling all the boxes first, is the winner.

'It helps my children practise counting in an engaging way, it actually hastens the process of their learning along with supporting peer learning which is the aim of our *Nali Kali* classes. My children are able to construct their own knowledge and develop mathematical vocabulary during the process of their play which I could not have done through our regular method of teaching.'

Let's create words

This game is developed by Ms Tulasi, also a teacher. In this game, children use colourful pieces of puzzles printed with letters to build new words.

Simple indoor games that promote learning

Name	How to play	Skills
Ali guli mane	*Ali guli mane* is an abstract strategy board game that has originated in Karnataka. The name of the game is simply a description of the board – 'wooden block with holes'. *Ali guli mane* is played using tamarind seeds. This game can also be played by making circles on the floor if a wooden block is unavailable.	Waiting for one's turn, counting, subtraction can be effectively introduced and developed through this game. This game can also be used to help children explore and experience the concept of grouping numbers. For instance, children could be asked to distribute the given number in various groups of twos, threes, fours, fives, tens etc. It can then be used to discover the fastest strategy to count by distributing the seeds into various groups to skip counting each.
Kavade	This is another traditional game that can be played by four players who have to move their counters without their counters *(kayi)* being 'killed' by those of other players. Tamarind or other such seeds can be used as counters. The player who succeeds in making his or her counters reach the centre first is the winner.	Waiting for their turn, problem-solving, decision-making, counting, subtracting can be effectively introduced and developed using this game. This game can also be used to develop the concept of odd and even numbers.
Jenga	In this game, players take turns to remove one block at a time from a tower constructed of 54 blocks. It can be played individually or with two or more players. When two players play, whoever is able to remove the maximum number of blocks is the winner. Locally available wooden blocks can be used to play this game. Children enjoy constructing various structures using these blocks.	Fine motor skills, patience and concentration can be learnt through this game. It also helps in controlling impulsive behaviour. These Jenga blocks can also be used to teach grouping, counting and shapes. Children learn and discover the strategy of arranging these blocks which will help the building last longer.
Matching blocks	Printed blocks with different shapes and letters can be used to help children play with letters and objects printed on the blocks.	Fine motor skills, sorting, vocabulary, phonetics awareness can be developed using this game.
Matching discs	50 to 60 discs on which multiple objects are printed are given to children. Discs are placed upside down and players keep lifting the discs to match objects on the discs with the previous disc that they have picked.	Preconcepts of counting, such as matching shapes, can be developed using these discs.
Get the car out of the traffic	Multiple puzzles can be played using this board game. Players have to come up with various strategies and get the car out of the traffic. Various objects like wooden or cardboard blocks can be used instead of a toy car.	Strategising skills, problem-solving and decision-making skills can be developed using this game.

Acknowledgements

This article is the result of my discussion with our teachers. The author would like to thank the teachers, Ms Jayamma, Ms Annamma and Ms Tulasi for sharing their ideas on games. Special thanks to my sister, Asha and my niece, Sahana, for introducing me to the world of board games.

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> Playtime is a sacred, magical bonding space. Of course, during the course of the day, some or the other child might pipe up with an idea for playtime, because their creativity has been stirred by the games and it continues to bubble. At such a time, you would have to resist the urge to say, 'stop daydreaming and pay attention,' and gently tell them to save it for the next round of play.
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> *Valentina Trivedi, Emotional Development Through Play, p 88.*

Play Activities for the First Day of School

Gajendra Kumar Dewangan

Children learn very easily when they are having fun. So, when a play activity is conducted with the aim of purposefully teaching something, the pace and result of learning increase manifold. Play can be used for teaching new and difficult concepts easily, in a short time and in an interesting way. One only needs to keep in mind that any play activity that is used is purposeful, well planned and well prepared.

Play activities are important and necessary for very young children (in the age group of 3-8 years). Schools work in different areas of development through various play activities. I am sharing some play activities that can be used for the emotional development of children, especially at the start of a new academic year.

Ice-breaker games

At the beginning of a new academic year many children come to the school for the first time and everything around them is new, including the school building, other children, teachers, classrooms. This newness is not only for children but also for some teachers. We see so many new children in a new academic year - some of them are enthusiastic and happy, running around, some holding hands of their siblings, some scared, some sobbing and some insisting on going home. In such an environment, it is a big challenge for both the teacher and the child to instil confidence in each other's mind and create an environment for working together.

The challenge for the teacher is to instil confidence in the children about the school and to ensure their safety. The teachers are not familiar with each child and their behaviour, interests or willingness to be in school. The children are expected to cooperate, make friends and get used to the new surroundings and their classmates. Many children have these qualities naturally – of making friends, learning new things – but not all. Some children need to learn these qualities. So, it is important to organise some activities or games in which children take part readily and happily.

Introductory activity (throwing ball)

Material - A ball with colourful, attractive pictures.

This could be the first activity on the first day of class I when children and teachers are unfamiliar with each other. This game can be played in class to know everyone's names. Children and teachers stand in a big circle either in the classroom or outside, in the field. They discuss the pictures on the ball. Whoever has the ball in his or her hand, throws it to someone else. Whoever gets or catches the ball tells his/her name and then throws the ball to a new person. In this way, the game goes on till everyone's name has been told or known.

Children get acquainted with each other very easily through this activity. They become friends. They call out each other's names asking them to throw the ball to them. They freely run after the ball if it is thrown away from them and bring it to the child whose turn it is.

Neta-neta chal badal (follow the leader)

Children and teachers sit on the ground (classroom or field) in a big circle. The teacher becomes the leader first and says that everyone should look at her/him, follow the action that he/she is doing and keep singing this song together *'Neta-neta chal badal'.* At the word, *badal* (change) the teacher changes her/his action, and the children have to copy it immediately. The teacher can start the game by clapping and singing a song. Children will also clap and sing. Then, the teacher can make some changes in the clapping style, like clapping his/her thighs with hands. The children need to follow that. There is an endless number of actions that the teacher can do. Some may make the children laugh, like making a funny face or scratching the head.

Next, one child is chosen and sent out of the group. The rest of the children choose a leader. When the child comes back, he or she has to figure out who the new leader is. Once the new leader is identified, he or she would be the one to go out.

In this game, children learn qualities such as suggesting names, agreeing on the choice of leader, team spirit, observing closely, singing and acting.

Udd/Kha (fly/eat)

Children and teachers stand together in the classroom or outside in the field in a circle. Everyone plays *Kha* together. The left hand is stretched out in front and the right hand is placed over it. The teacher then mentions the name of any food item. Everyone has to say *Kha* in a loud voice while bringing their right hand towards their mouth. If the teacher mentions the name of something that cannot be eaten, then no one should say anything nor do any action, if they do, they will be out of the game. Similarly, when playing *Udd* if the teacher calls out the names of things that can and cannot fly.

These games help develop the qualities of honesty and decision-making in children. Small children accept their mistakes with sincerity and go out of the game. Children also observe others and decide whether they are right or wrong.

Bolo bhai kitne (say how many)

Children and teachers stand together in the classroom or outside in the field in a circle. Everyone runs in a circle, clapping and singing. The teacher says, *Bolo bhai kitne?* (how many?); the children reply, *Aap bolo jitney* (you tell us how many)! The teacher calls out a random number. The children have to form groups with that many members. For example, if the teacher says, 'three', then three children form a group. Any group that has fewer or more children is out of the game. If the teacher says *Murti* while the children are running, everybody stands still like a statue in their places. They should not move until the teacher says, *Surti*. Whoever moves is out of the game.

Through this game, children develop qualities like friendship, quick decision-making, team spirit, honesty, leadership and concentration.

Poem recitation

Poem recitation with actions is incredibly powerful in the development of small children. In this activity, children are invited to recite a poem after the teacher has demonstrated it. Although many children scuffle to present their poem first, they understand once it is explained to them that they have to recite by turns. This is how they learn to wait for their turn and listen to others patiently.

Many times, they collaborate with each other for group presentations and display exemplary team spirit.

Story reading and role-playing

After narrating the story with gestures and voice modulation, the teacher asks the children to enact it. The children have a discussion and reach an agreement in selecting the characters. They also suggest an appropriate name for a particular character. They make arrangements and prepare necessary props, discuss various issues during practice and give suggestions for dialogues, content and visuals with consensus.

In this way, children learn and practice human qualities such as decision-making, agreement, working together, appreciating each other's work, etc.

These are some activities and experiences from my practice. It has been observed that while playing in school, children learn the valuable qualities of cooperating and seeking cooperation, making collective decisions, waiting patiently for their turn, listening carefully to other children and teachers, encourage and respect their friends and ask questions to understand things.

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Designing Play Sessions | Some Good Practices

Kushal Agarwal

'Sports is important for holistic development', 'Sports improves children's well-being', 'Children learn life skills while playing sports' were some of the points mentioned by teachers during our discussion on *Sports in Education* on The International Day of Sport for Development and Peace. The day, celebrated on April 6, was inaugurated by the United Nation in 2013 to celebrate the power of sports to drive social change, promote community development and foster peace and harmony.

More than 30 teachers from the Raigarh district (Chhattisgarh) participated in the webinar. The points mentioned above clearly indicate that teachers are aware of the importance of sports in children's lives. Teachers are also aware that the ground reality is very different because some schools do not have playgrounds and sports equipment. Even if many rural schools have large campuses, the grounds are too rough and uneven for children to play safely. In most schools, the games period is used for assembly or lunch or it is scheduled at the end of the school day when most children just leave for home early. Even if the games period is organised, the focus is on drills and PT that many children do not enjoy.

To tackle this challenge, for the last three years I have been designing sports sessions that are pragmatic and can help teachers and coaches to conduct sports in schools successfully.

Changing mindsets

In my experience and from what I have seen in private and government schools, the focus of teachers is to conduct march pasts and drills which clearly indicate the old school of thought which focused on one-way communication in which children are just the recipients of instructions. Sports, clearly, offer important skills for children, such as strategising, problem-solving, cooperation and social skills. If you have played with or observed children engaging in free play (unstructured and without adult intervention), such as gully cricket or *gilli-danda*, you would have noticed that children use higher order thinking and strategising in these games.

One such example is Bit-by-bit cricket. The game was developed by children who innovated and accommodated to their surroundings in which they could not find enough space to play. A game of Bit-by-bit cricket, which is played in many parts of the country, can engage six to eight children in a 100-200 square foot area. To play the game, children have invented new rules which are different from those of regular cricket. While in regular cricket runs are scored by hitting boundaries or singles and doubles, in this street version of the game, players can score runs by just successfully defending the ball. The rules are so difficult (for it very easy to get out) that the batsman must use a high level of strategic thinking to save his or her wicket. The game teaches patience, strategy, handling pressure and many other skills that are very important in life. Yet, we fail to recognise this and sometimes, even discourage children to engage in such play which we think is a waste of time. Let me give an analogy from a different field to explain the importance of such learning.

In Nicaragua in Central America, until the late 1970s, there was no sign language because people who were hearing-challenged remained isolated. So, the government set up a school for hearing-challenged children that focused on teaching language to them through drilling lip-reading and speech. However, the results were dismal; children did not show any improvement. Then the same children started inventing ways of communicating with their peers on the playground and in the school buses where there was no adult intervention. Before long, the interaction among the children became a system structured into what is called *Lenguaje de Signos Nicaraguense* (LSN), which later developed into a standardised sign language for children with hearing challenges.

Similarly, instead of making children do drill and march pasts which they clearly do not seem to enjoy, we should learn from children and bring their free play to our sports session. While the free play that children engage in hones many valuable skills, sometimes, it can be risky and may lead to bullying and exclusion of some children. In such circumstances, adult intervention is required. The adult can help create certain guidelines which promote inclusivity, safety and fun for all.

Based on my experiences, here are some best practices that I would suggest for teachers to make games and sports more enjoyable for children.

Safety

For physical safety, we must clearly mark out play areas and convey to the children the spaces that are out-of-bounds or unsafe, for example, slippery areas and uneven and concrete surfaces. Communicating some ground rules before play sessions, such as no pushing and fighting, contactless play, redefining winning and fair play and cooperation can help in creating a better and more positive environment in the playground.

Gender parity

When I started conducting sports sessions in schools, whenever I asked the children to form a team, all the boys would stand on one side and the girls on the other side. It took great effort and time for me to create mixed groups. Struggling with it for a session, I decided to use an activity named 'Bolo-bolo kitne' to divide the team equally without giving explicit instructions. This can work both as a warm-up and a transition (from one game to another) activity. The coach or teacher calls out, *'Bolo-bolo kitne?'* (Say how many?) and the children who are running in a circle reply, *'Aap bole jitney'* (as many as you say). The coach repeats the same question a few times more till the children have run a few rounds. After that, the coach calls out a number and the children must form groups of that number. For example, if the coach says, four, the children must form groups of four. Initially, they will still form separate boys' and girls' groups. Children who are not part of the groups come to the centre and help the coach. The game goes on for a few rounds and in the final round, the coach says that children must form a group of an equal number of boys and girls. The mixed-gender groups formed are declared as teams for the games to be played.

This is just one example; teachers and coaches can take other games and ice-breaking activities to create mixed-gender teams without explicitly giving instructions to children to form mixed groups (which can take a lot of time).

Another important way that the game sessions can be made safer and more inclusive is by modifying rules. For example, for a game of *kho-kho*, the coach can give clear instructions and show how to gently tap instead of hitting a person, in *kabaddi* allowing only a girl to be able to defend a girl raider, in football, instructing a strict 'no' to shoulder-push or making it contactless and in cricket, preventing fast-speed bowling.

Focus on fun

There are only one or two games sessions in a week for children and coaches must see to it that the children can enjoy as much time playing as they can. It is a good practice to set up a play area and equipment in advance and not spend too much time explaining the rules or giving instruction (remember the 80:20 rule - 80% playtime, 20% time for giving instructions, transition between games and setting up equipment). Having multiple activities to engage in is also a great way to make the session fun for the children.

Reflection

One of the good practices for coaches is to ask all children to gather together five minutes before the end of the games session to discuss their activity. During games, in the heat of the moment, children sometimes abuse, push and or engage in unfair play. It is a good time for the coach to point out the importance of values, like fair play and cooperation, without pointing out specific children.

Conclusion

While it is easier to write about what we should and could do, it may be difficult to implement these on the ground. Some of the challenges will come from other stakeholders, like parents and the community and maybe a few other teachers as well, who would want children to just focus on the competitive nature of sports like winning tournaments and who may disapprove of the idea of boys and girls playing together. Other challenges can come from children who may not want adult

intervention during games period which they see as purely their leisure time for enjoyment. In the latter case, I will request teachers and coaches not to force children to your idea of fun and let them enjoy their own games. During such times, you may focus on children who may not otherwise engage in games and try to make the session fun for them.

While there are several challenges we may have to face – planning, setting up objectives and reflecting on the sessions, doing these will take us a long way towards creating sports sessions from which children derive more joy and benefits.

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Play needs to be child-centred, and children must enjoy playing. It should make them explore their environment through thought and inquiry to find ways to satisfy their curiosity.

Yogesh G R, A Day in an Anganwadi Centre, p 91.

Nature Walks as a Pedagogical Tool

Maddirala Sai Praveen

Learning by playing in different types of outdoor spaces provides a wide array of learning, gross motor and mental health benefits for children. Nature walks are a way by which children in *anganwadi* centres learn from their environment. Nature walks are outings to an open space by which the teacher plans to give specific exposure to the children on a particular theme.[i] For children, it is a change from their daily routine during which they get exposed to and can interact with the environment. They experience joy and wonder in this form of interaction.

Types of nature walks

Children can be taken to fields, parks, playgrounds, or a school depending on the purpose of the visit that the teacher decides on. For example, if the plant and tree theme is in progress, the teacher can take the children to a park. Learning happens naturally when children are outdoors experiencing the environment around them. The walk can also be to the nearby post office, bicycle repair shop, police station, place of worship, Primary Health Centre, carpentry workshop etc, where children can interact with the community members and learn from them. These walks provide limitless opportunities through sensorial stimulating experiences for hands-on learning.

A nature walk to look at plants and trees

Let us understand the entire process of this pedagogy by going on a walk along with a group of children from an *anganwadi*.

A day before the nature walk, the teacher informed the parents and asked them to send a water bottle and a napkin with their child the next day. Before going for the walk, the teacher made all necessary arrangements (for example, carrying paper and crayons) and also told the children about the places they would visit. The teacher also stressed the fact that all of them need to be in a group and must stay together.

The walk

The walk started from the *anganwadi* with the teacher leading the way followed by the children in a line, with the *anganwadi* helper at the tail-end. The children came to a field where vegetables were planted. The teacher asked the children to look at the parts of the plants, such as flowers, stems, buds and vegetables that were growing there. The children got the opportunity to touch and feel the plants, flowers, fruits and asked questions, like how do the plants grow? Do plants eat food? To take the discussion further, the teacher had a conversation about plants - parts of a plant, how plants live and the uses of plants.

The children also came across bikes, a tractor, a herd of sheep, cows and buffaloes. They waved to their neighbours. Such experiences refresh the children's state of mind. They enjoy entering

the world in which they otherwise roam freely and regularly. One child expressed her happiness on seeing buffaloes belonging to her family and another in showing his peers the spot from where they brought their water.

Follow-up activities

When the group came to a temple that had ample open space, the teacher made the children sit in a circle and conducted a warm-up activity for them to settle down and followed it up with a conversation on what the children had seen during the walk. Even the children who did not participate actively in conversions inside the centre, shared their experiences joyfully.

The teacher then gave them the opportunity to draw what they had seen during the walk. Children used crayons to draw (good for the development of fine motor skills). They expressed their happiness creatively in the form of beautiful art with details that they could easily recall. The teacher could stretch this activity to include more than what she could do inside the *anganwadi* centre since what the children had seen was fresh in their minds.

A child's drawing of the Gandhi statue (which they had seen on the way) along with two children playing next to it.

Children explaining that the blue circles were lakes and the orange circles were paddy fields.

To provide opportunities for the development of gross motor skills, the teacher had designed a game in which the children were instructed to collect fallen leaves, twigs and flowers. While collecting them, children were giggling out of joy, talking to each other, 'I got more leaves', 'You got a big stick' etc. The teacher intervened where necessary and facilitated a seamless discussion to build their understanding of concepts of 'more and less' 'big and small'.

In a pleasant environment, children are motivated to explore their surroundings, play with other children, and engage in activities conducted by the teacher. There is little scope for them to fight or quarrel with each other in such a joyful setting. Following instructions like not to pluck flowers, leaves, avoid running on the street, crossing the road carefully, etc., encourages children to follow good social behaviour.

Conclusion

Learning from hands-on experiences makes long-lasting impressions in the schema of children. This happens successfully when we bring the children out of the centre and provide opportunities for them to explore and experiment in nature. In the entire process, the teacher needs to provide appropriate scaffolding to children to construct understanding.

Nature walks are an important pedagogical tool which when integrated with a thematic curriculum can aid in enhancing the understanding, thinking and curiosity of children regarding a specific theme. Nature walks, along with suitable follow-up activities, can lead to the development of children's social, emotional, language, cognitive, physical and creative aspects. The children's levels

of interest increase during nature walks which, in turn, increase their participation in the follow-up activities thus facilitating their learning in a playful environment.

Acknowledgement

The author wishes to acknowledge the help and guidance of Yogesh G R (ECE Sangareddy) in writing this piece.

Endnotes

i ECE Sangareddy is an initiative of the Azim Premji Foundation to build the capacity of *anganwadi* teachers. As part of this, *anganwadi* teachers are helped with implementing a developmentally appropriate learning programme in the centres. Detailed plans for 14 themes, such as plants, fruits or seasons, etc, that the children explore through the year, have been created.

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Simple Play Activities for Behaviour Modification

Maqsud Ahmed

As a Physical Education teacher, it is obvious that I will endorse play activities both in the field and off it for the physical and mental health and wellbeing of students. But along with this, there are numerous other behavioural patterns that can be modified when demonstrated using simple play activities. I am sharing some of my experiences.

Sitting in a group

To make children understand the importance of discipline in everyday living, it is best to adopt an experimental approach so that children can weigh the positive and negative aspects of activities and situations and arrive at conclusions on their own.

The children in my primary and upper primary classes had the habit of sitting in a group and making noise. I explained to them several times that if they flock together their hands will collide and their handwriting will be affected. Also, not everyone will be able to read what is written on the blackboard clearly.

When they did not comply with what I told them, I decided to engage them in an activity to drive this point home. I made the children stand in a group and gave each one of them a ball. I placed a target at a short distance away from them and asked them all to hit it with their ball at the same time. Only two balls hit the target. There were twenty-one children in the group.

With the help of a play activity, I successfully delivered a message about the negative impact of sitting in a group in class. After this, children always sat at a distance from each other in class and that too without my having to tell them.

Making noise in the classroom

Children making noise in the classroom is a common problem in every school. One day, I noticed that when children of classes II and III came to the playground to play, they were making less noise than they make in the classroom.

I stood before them and told them that I would tell them a story and no one should talk or make noise throughout the story – from start to finish. I began telling the story and students started to talk among themselves. I finished telling the story and then I began asking each one of them to retell the story. Some knew half, some knew even less, and some did not know the story at all!

I told them how they disturbed others and missed the explanation of topics in class when they were always busy talking with each other. After this, they began to sit quietly during class and also kept quiet and listened attentively when I explained the rules and skills of a game in the playground.

In summary

Group games in school reveal a lot about children and how they view themselves. Sometimes a little guidance from teachers can transform a child completely. There was a young boy in my class who I noticed was very good at controlling and guiding a group of students in the classroom during group activities. But if I asked him to lead the children on the playground, he would hesitate and even start stammering.

One day, while the students were playing *kabaddi*, I asked him to guide a few students in the game. Gradually, I increased the number of students in his group. He became a leader without realising it. I discussed this with the Principal and we gave him the opportunity to conduct the primary school assembly. He read a speech on leadership in the assembly without stammering. After a week, we had a combined assembly for primary and upper primary classes and this boy conducted it with no fear or hesitation. We are continuously seeing him improve and become a more confident person.

There are numerous ways in which we can help children modify their behaviour, gain confidence and overcome their fear or shyness by using simple play techniques. Many children have a fear of facing

a group or gathering. They hesitate to come in front and face the class or the school assembly. It is the job of a teacher to sense the feelings of each child and help him or her with sensitivity and tact.

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The agency of the child provides the setting for the adult caregiver and the child to jointly explore the world, share linguistic and rational tools, and acquire methods of endowing things with value and meaning. The child's playful exploration of the world, by seeing, hearing, grabbing, tasting things when accompanied by an adult, results in an interactive exchange of knowledge, values, meanings and modes of using the objects around.

C N Subramaniam, Play and Education - Some Points to Ponder, p 03.

Games with Picture Cards | My Experiences

Munshi Lal Barse

Play is an important part of a child's early development and education. I have taught up to class VIII where I have seen and worked on many possibilities and realised the benefits of play and education. The day I do not include any activity in my class I feel that I am missing out on something. If there is no possibility of play or activity in a certain concept, I start the class with a general warm-up activity or game that helps students to listen, speak, read, write, reason out or guess.

Preparing cards

There were twenty-four new students in class I who were not familiar with speaking, reading or writing English letters or words or pictures based on the words. The baskets of word picture cards were available in the school/classroom. I used these cards every day to familiarise them with reading and speaking. I told children to read and understand these picture cards in their free time and play with them. But I did not see them doing this on their own and I had to get involved. I soon realised that children played 'photo win' and 'card game' secretly and would stop playing or hide the cards as soon as I or any other teacher came by.

I decided to play these games with pictures, picture-letter, letter, picture-word cards in English so that they would learn while playing.

The main stages of preparation for this game were as follows:

1. Creating a theme-wise list of all the keywords for class II.
2. Creating word-picture cards for each keyword.
3. Creating word-picture and letter-picture posters of selected words.
4. Selecting four words from each letter of the keywords. Then preparing rectangular picture cards of size 5 X 10 cm (draw or paste the pictures). Total number of cards 4 X 4 X 26 = 416 cards
5. Preparing rectangular letter-picture cards of size 5 X 10 cm, drawing or pasting pictures and writing letters on them. Total number of cards 4 X 4 X 26 = 416 cards.
6. Preparing rectangular word-picture cards of size 5 X 10 cm, drawing or pasting pictures and writing words on them. Total number of cards 4 X 4 X 26 = 416 cards
7. Preparing rectangular word-cards of size 5 X 10 cm, writing words on them. (Total number of cards 4 X 4 X 26 = 416 cards)
8. Preparing rectangular letter-sound cards of size 5 X 10 cm. Total number of cards 4 X 4 X 26 = 416 cards.

The complete set of the letter A is shown in the table below:

Types of cards	1	2	3	4	Total number of cards
Picture card					1 X 4 X 4 =16
Picture+letter card	A  a	A a	A a	A a	1 X 4 X 4 =16
Word+picture card	 apple	 axe	 ant	 aeroplane	1X4X4 =16
Word card	Apple	Axe	ant	aeroplane	1 X 4 X 4 =16
Letter card with sound	A a ऍ	A a ऍ	A a ऍ	A a ऍ	1 X 4 X 4 =16

So, there would be 20 cards for a letter. There were a total number of 80 cards in four sets. (26 X 80 = 2080 cards for 26 letters). All the cards were used in two games. That is, a total of 10 sets of pictures, letter picture, word picture, word and letter sound cards were made. In this set, each word, letter and picture was coloured with four different colours (black, red, blue, green). The blank sides of the cards in each set were also coloured with a different colour crayon.

Sound-letter games

Day 1: To familiarise the children with the cards, they were shown the letter-sound video of *Sampark Foundation* on the first day. The video introduced six letters by discussing the pictures and taught the children to ask, 'What is this?' This was done as a group and pair activity in the classroom. Children coloured twelve pictures of three letters in the class to learn letter writing and recognition. They were asked to colour the remaining twelve pictures of three letters at home.

Day 2: The next day, they listened to the sound of the letters on audio and did the same exercises for the remaining six letters as on the first day.

Day 3: The children were asked to recite the letter-sound poem on m, n, o, p, q, r, s without listening to it. After that, 'Snatch a Card' was to be played.

But before that, we had this dialogue:

'Do you want to play?' I asked.
The children said, 'Yes... Yes... Yes.'
I asked again, 'What happens in a game?'
The children answered, 'It is fun, we run, hide, and catch.'
I asked, 'Why do you have fun?'
'Because we win.'
I said, 'It means someone loses and someone wins. How does the loser feel?'
One child said, 'Feels bad.'
I asked the other children, 'And how do you all feel?'
One child replied, 'No, teacher, I will win the next time.'

I continued the conversation and said, 'It means that sometimes you win; sometimes somebody else wins. If we practice regularly and put in sincere efforts, we win. Those who win should feel happy. But those who lose should be ready to play better the next time. And the ones who win should be congratulated.

'But some children tease the loser,' some children said.
'Why?' I asked.
All were quiet. I said, 'Okay! Let the winners think about it! If the losers do not play again, then with whom will the winners play?'
'They will not be able to play with anyone,' the children replied.
'How will he feel then?' I asked.
'He will not like it,' said the children.
'So, tell me, is it okay to tease?' I asked again.
'No.' they said.

I continued my conversation addressing all the children, 'So we will play the game keeping in mind that we will not tease anyone for losing. Now tell me, whether to play or not?'
All the children shouted in unison, 'We want to play…we want to play!'
I felt that almost all the children had understood the spirit of the game.
I said, 'Okay, let us start today's game.'

Snatch a Card

In this game, seven picture cards are placed at a distance of two feet each. Children stand facing each card. The card has to be touched as soon as the name of the picture is called out. Whoever touches it first, gets the assigned points. The points are shown on the board like this: (p = person)

P-1		P-3		P-5			P-7		P-9		P-11		P-13
Mango		Nest		Orange			Parrot		Queen		Rat		Sun
P-2		P-4		P-6			P-8		P-10		P-12		P-14

After playing the game, the children completed 14 pictures by joining the dots and coloured them in the class. The remaining 14 pictures were to be done at home. Finally, the remaining seven-letter pictures were completed in the same way.

Day 4: After the listening-comprehension process was completed, I wanted to confirm whether the children knew the names of the pictures in English properly or not so on the fourth day, all the cards were mixed and the children were asked to pick up any 14 cards from the pack. Then, they were divided into groups of five.

I gave them instructions on how to play. Everyone had to hide their photo card. Then, by turns, each child would take a photo, read out the name written on it in English and place it in the centre. If the photo matched the previous photo placed in the centre, the child would win all the photos placed in the centre. When someone had no photos left, they could still play by borrowing photos from the winner, to be returned later. The children said that this is also how they played 'Photo win' and that they were excited to play. The game started and the children had fun. After the game, I told them that we could play it whenever they wanted in their free time.

Day 5: We did the activity of reading and saying the alphabet aloud from the chart and a set was prepared based on the colour on the blank side of the cards. Children were also taught a new game, the popular ‘matching pair’ game which is played with playing cards.

Some children were eager to play. One child remarked that playing cards was not a good thing: that the police would catch those who play cards. I told them that we are not playing with money. We are just playing the game to learn to read. Our picture cards are learning tools and not regular playing cards. Then, the children agreed to play.

Day 6: The children had to recite the poem - a b c d e f g… and play 'innings win' with letter-picture cards. This game is played in groups of six with teams of three members. The members from both the teams come one by one, tell the name of the card and keep it in the centre. As soon as identical cards are paired, the team that has matched them becomes the 'innings winner'. In this way, the game continues. In the end, the team that has won more times is the winner.

The children said, the game was similar to the ‘photo’ game and that they had a lot of fun and would like to play in their free time as well. As a teacher, I wanted the children to say that they want to play. And it was very fulfilling to know that children were motivated to play these games on their own. This was an achievement!

This was followed by reading names on a chart paper, pairing words with pictures, completing incomplete words, reading word names with the help of pictures and colouring the words, reading the letters appearing in the words one by one and playing ‘photo win’ and ‘innings win’ with word picture cards both as classwork and homework for the next four days.

Word games

In the next stage, children practised reading, recognising and writing words. After reciting a poem in chorus, the game, ‘Who am I’ was played. In this game, a word card is pinned on a child's back with a safety pin. This child can neither see the card on his/her back nor is he/she told about it. The rest of the children read the word card. If a child has difficulty in reading, a member of the group tells him/her softly so that the cardholder cannot hear. Next, the cardholder child has to figure out the word. He/she asks some yes or no questions to the rest of the children. He/she wins the game after guessing the word correctly through these questions and answers. Initially, there may be a little difficulty in guessing the word but after some practice, the children understand the process/ pattern.

While practising reading and writing words, children became familiar with the form or structure of the words. They started reading and writing many words. The children then did the following activities - listening to stories and poems, writing down certain important words that appeared in them, reading the words, reading the letters in words one by one, drawing a picture by reading the word name, writing word names for pictures, etc.

The next step was to understand the letter and its sound, for which they were shown the video of Sampark Foundation. The children repeated the sound poem after seeing the video, sang it and had discussions to understand how A B C or any other letter would sound in a word. For example, A = ऐ, B = ब, C = क and स. Finally, they reached the basic stage of reading and writing by playing the game using the letter-card set, joining the letter-cards and reading, listening and writing and reading and writing rhyming words.

Conclusion

This is the story of my thirty to thirty-five hours of direct-indirect work and practice. Now the children keep playing games of cards in their free time. They are using their time meaningfully and learning. This also means that in their initial school days children should not feel bored with the direct teaching of reading and writing. Instead, if some games are introduced, then learning becomes enjoyable and many children learn. Games contribute in a way that has directly helped me in my teaching-learning process.

My takeaway from this experience is:

- It is necessary to discuss the rules of the games, social experiences and beliefs related to the game, otherwise, it will be impossible to connect all the children with the games.
- There should also be innovations in games. I tried to innovate through new cards or a new game.
- We should not be strict with the idea that children must learn, otherwise, the games also become boring. For example, if the children could not name the card, I would tell them as many times as they wanted and ask them to try again. I also believe that children will learn from each other while playing together.

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Sports for De-Addiction

Narasimha M S

Play is an integral part of human life. It has many benefits for children in terms of physical, emotional, and social development. I am sharing an experience of how I introduced the game of *Ultimate Frisbee* to a group of adolescent boys who were addicted to alcohol and how it helped them to overcome the habit.

The transitioning from childhood to adulthood and becoming young adults is a time fraught with many challenges – physical and emotional. This is also a time when teens may adopt undesirable behaviour and habits due to peer pressure or the thrill of taking risks. In a school I worked with there was a group of adolescents, who would routinely consume alcohol in one corner of the school grounds. I decided to engage them in the game of Ultimate Frisbee.

Ultimate Frisbee is a mixed-gender, non-contact team sport. It is self-refereed, and the spirit of the game is given the utmost importance. Each player is responsible for his/her own actions and responses. The rules are a mix of the rules for basketball and rugby. The spirit of the game is its most attractive feature. It is played in a field half the size of the football field and the game consists of seven players on each playing side. It requires physical agility, teamwork and focus.

When I first approached this group of teenagers and asked them if they would like to throw the disc, they thought it was an easy thing to do. But when they tried and could not throw it correctly, they felt challenged and started asking questions about how to throw it and how the game is played. I explained it to them.

Overcoming initial challenges

In the beginning, they were not willing to play with the others; they were comfortable only with their own set of friends. No one was ready to discuss the strategy or the game plan, they played the way they wanted to. They also completely ignored working on their fitness, which is the core of any sport. There were misunderstandings among the players and fights would break out over small issues. It took more than six months for them to start playing with each other and listening to each other. Their aggression came under control and there were no more fights on the field.

Their fitness levels were very poor in the beginning and they could not run because of which they showed reluctance to play, even though they came to play regularly. Gradually, they started to realise the importance of fitness in the sport and began working towards it.

Although Ultimate Frisbee is a mixed-gender sport, the boys refused to pass the disc to the girls. They did not think of the girls as equal partners in the game. They believed that the girls would not be able to catch or pass the disc. It took almost 10-12 months for the boys to accept the fact that girls could play as well as boys.

Results

Slowly, one could see the positive changes in the boys. Most of them had played individual sports earlier but playing this team sport, Ultimate Frisbee, was a challenge for them. The main change, which was visible over a period, was the complete change in their behaviour towards others and the approach to all the challenges presented during the game. Their confidence levels increased a lot, and their collaborative skills improved manifold.

Their aggression was also under control and they were displaying a lot of patience both on and off the field. They were also willing to include anyone in the game and were open to learning and teaching.

Long conversations and discussions on alcohol addiction helped them reduce its consumption. Over the period of one year, they were able to play without getting tired.

I am happy to note that almost two years after I initiated them into this game, they are still playing as a team. They do not consume alcohol anymore and are doing well and working hard in their careers. They have also introduced the sport to their friends. Some of them have represented our country in different tournaments organised across

the globe. All these changes occurred over a period because of the rigour of the sport which demanded an immense level of commitment from them towards the game.

Conclusion

Play is an important strategy to meet the developmental and learning needs of young children as much as for the older ones. The experience mentioned above was with a group of adolescent children. I have subsequently, introduced Ultimate Frisbee to younger children in schools and met with an equally good response. There has been a positive behavioural change in these children. Among other things, one can observe improved collaborative skills, closeness, being sensitive towards oneself and others, honesty, listening to other opinions and ideas, leading the team and strategising before the game and conflict management.

During play, one gets to meet and interact with many people, which helps to widen one's perspective and breaks open any conservative mindset, re-examines biases, stereotypes, and barriers. We saw how this group of boys that I worked with had initially ignored the girls because of their ingrained gender biases.

Playing allows for experiential learning and helps children understand their strengths and limitations: while strengths can be leveraged to full potential, limitations are not one's weaknesses. Play builds a strong bond amongst all players in a team and helps in decision-making. Decision-making is an act of choice, we need to decide only when there are options, it is a conscious approach to solve a problem one is faced with.

Playing a sport relieves stress and tension and can develop emotional and physical strength, especially when young adults (or children) are frustrated, angry, sad, or nervous. It promotes positive attitudes: being happy with who one is, continuing to grow and improve oneself in all aspects, while also encouraging others. From the example above, it is clear that the sport presented the boys with an opportunity to prove themselves and the physical activity induced happiness and a sense of achievement.

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Learning Area and Perimeter Through Play

Rahul Singh Rathore

Play is one of the main ways through which children learn and develop. When we explain a concept in any subject, such as an event in history, a poem or a concept in mathematics, it can be made more interesting and meaningful through play. In an environment in which children themselves do things, they move towards learning easily and quickly. I want to share one such experience of mine.

In class V, I was getting ready to teach the topic, *Perimeter and Area* and decided to explain these two concepts through games and activities. I took the children to an open field and asked them to tell me one game that they like so that we could play it. All the children wanted to play *kabaddi*. So, I divided the children into two teams - A and B. The *kabaddi* match started. The children of team A were scoring more points, so team B said that the size of team A's court was bigger, that is why they were scoring more points. Team A said that this was not correct. Both the teams started arguing.

I told them to measure the playground. Based on their previous knowledge from class IV, they said that if they measured the area, the truth would come to light. All the children agreed to do this.

But now the problem was how to measure it? One child suggested that we first measure a small part, then, based on that, the remaining part could be calculated. Everyone agreed. I divided the children into three groups – A, B and C and assigned a part of the playground to each group and asked them to find the area and perimeter of that part. I told them that they must measure the field using the material they find in the field. Everyone started by choosing the material they would use. Some children used a wooden stick, some used tiles and some used their fingers.

The conversation that took place between some children is given below. As the teacher, I facilitated this discussion and steered their thinking in the right direction.

Group A

Ravindra: We have drawn a line around our part of the playground. But we do not know what to do next.
Teacher: We have to find out the area of the court we were playing in.
Ravindra: But we need to find the area of the part covered by the line we have drawn.
Teacher: Yes.
Ravindra: So how to find out how much space is occupied by the part of court given by you?
Teacher: How did you figure out the area of leaves in class IV?
Children: We counted the squares by placing the leaf on graph paper. The number of squares that we got was the square unit area.
Teacher: So, can you do the same in this case?
Gairki: But we will need graph paper.
Teacher: Will you place the graph paper on the entire *kabaddi* court and measure it? In that case, if the area of the playground is to be calculated, then we will have to paste the paper on the entire playground and then count the squares.
Gairki: If we do that, the paper will fly away. Then how to measure? Where will we get so many papers?
Teacher: You can take some object to measure it.
Gairki: Okay. I have got this piece of plastic and have given it a square shape. Now we will measure with this.
Teacher: Okay.
Raju: But how will we measure with it?
Praveen: Let me demonstrate. We will mark the place wherever we place this piece of plastic. In this way, the number of pieces that occupy the space will be its area.
Monica: (pointing to the ground) But there is some space left here, how will we measure it?
Praveen: To calculate the area of leaves on graph paper, we counted more than half-filled squares as one square and did not count the ones that were less than half-filled. We will do the same here.
Raju: Okay.
Praveen: Look at this, we are getting a total of twenty squares here. So, its area is 20 square units.

Group B

Mayank: We have also measured it this way.
Teacher: Tell us how you did it. Then the children of group A will also know about it and we can measure our playground.
Mayank: We have measured with an eraser. We

kept it on the given part 300 times. So, the area of our part is 300 erasers.
Raju: But our part of the field was as much as theirs. How come we got only 20 squares, and they got as many as 300 erasers? It means that their area is bigger.

Group C

Sunil: Our group measured the area with a wooden stick. Our part was almost the same as theirs. But we covered our part by keeping the stick a hundred times. Therefore, our area is 100 units. Each group is getting a different area while the piece of field is the same, so how can it be correct?
Diva: Why don't we measure everyone's part of the field with a similar object, then the answer may be correct.
Teacher: Yes. By measuring with a similar unit, the answer will be correct. Because when we measure the area of our fields, houses, plots, it remains the same and its value is also the same everywhere.
Diva: But we measured such a small part. How do we measure our playground which is so big?
Teacher: Look at your part and think about the material that can be used to measure the area.
Mayank: My uncle measures with a (measuring) tape and calculates the area.
Diva: But only the length can be measured with it, how will we get the area?
Teacher: All of you look at your part. Observe if you see a pattern that allows us to find the area quickly.
Children: Okay, we will do this.
Gaurav: I have seen the part of the field given to everyone. It seems to me that if we multiply one side by the other side, then we get to know the number of times we have covered the ground.
Gairki: This means that we can also measure the surrounding boundary.
Teacher: Yes, why not? This is known as the perimeter.

**Names have been changed to protect children's identities.*

Raju: So, can we measure our playground with the help of a big stick and get the area?
Teacher: Of course, you can.

In this way, all the children shared the *kabaddi* ground equally and used a stick (same unit) to measure it. Other children of the school also used it, which helped them to understand the concept. We continued the same unit in the classroom and the concept of area of rectangles and squares was formulated in the same manner.

Children like to play with different types of materials. They easily engage in the manipulation of materials. When given appropriate tasks with adequate and suitable materials, children are naturally attracted to them and prefer to use them to complete tasks. Children feel burdened and uninterested if asked to work without any play activity and proper material. Generally, young children are attracted to objects of different colours and sizes. They are curious to work with their hands in different ways. This helps in developing the habit of playing with different objects which, in turn, enhances their creativity. In addition to the textbook, there is a wide range of ways in which learning can happen. With proper guidance from teachers, these methods can enhance children's learning.

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Learning English While Playing a Game

Ramchender Giri

As a member of the Field Institute, Azim Premji Foundation, I visit schools in our districts and interact with teachers regularly. I am sharing my experience in a government higher primary school in Bengaluru, which I had visited many times earlier. The school had been closed due to the pandemic for many months. The children had just returned to classes after a long break and teachers were making all efforts to get them back to 'learning'. Shortened syllabus, intense teaching coupled with regular tests – all of this seemed clinical and what was probably missing in these efforts was the awareness that for these teenage boys and girls, the loss in learning had to be understood in the context of complex family situations, trying times and poor emotional health. Overall, the environment was sombre, to say the least, and anything that could cheer us all up was very welcome.

I had developed an acquaintance with these teachers earlier through my work with them, so when I proposed to interact with these children by reading a story to them, the teachers readily agreed. I walked into the class of about 20 children in their teens, all seated on the floor waiting for their teacher to come in and teach. I introduced myself and asked them how good their English was. There were no responses. It was not surprising because English is taught in most classrooms as a mechanical exercise – children 'copy' answers in their notebooks and rote-learn to answer questions in tests. Speaking remains an aspirational skill even for many teachers. I quickly switched to Kannada and could sense their relief.

Now, I put forth my idea of reading a story in English but discussing it in Kannada. The children nodded in approval. I had taken with me a storybook with the story of Siddhartha and Devadatta. While reading the story in English and showing the pictures to the students, I was trying to prompt responses from them and writing those (words) down on the blackboard. The reading of the story, the pictures along with explanations in Kannada seemed to help the children comprehend the story and the class was quite engaged. Some children even volunteered to read a few pages as we moved ahead. At the end of this reading, the blackboard was full of words like *garden, swan, arrow, hit, save, king, servant, court, kindness, fight, fluttering* and many more – all from the story we had just read together.

I then asked a few general questions, like how did they like the story? What did they like most and what they did not? Children, by now, had opened up and started to speak in a mix of English and Kannada. They said they liked the story and realised that good deeds will always be rewarded. I probed a little further and asked if it is not difficult to be good always? To this, one girl responded that it was true, but they could try.

Meanwhile, a teacher came to the classroom and informed me that I could continue for the next half an hour, if I wanted to. I now asked the children if they would like to play a game. A roar went up with a big 'yes'. I asked them to open their notebooks or take a sheet of blank paper. To play the game of *Bingo!* with a slight variation, I asked them to draw boxes in a 3x3 matrix and copy any nine words from the blackboard into the boxes. I cautioned them to not copy from each other. This took about ten minutes for all to carefully select and copy words. Once they were ready, I explained the game.

Step 1. I would call out a word randomly from the blackboard and they would need to check if the word was on their sheet. If they had the word, they would scratch it out.

Step 2. When a row or column of three words had been scratched out, they would raise their hand and read the words out.

Step 3. Once all nine words on their paper/notebook were scratched out, they would call out *Bingo!*

The game was played in an extremely good spirit. All the students looked cheerful and satisfied that they had completed their game. As I called out a word, I erased it from the blackboard, so, in the end, the blackboard was clean.

How does a game like this help in language learning? Here are some thoughts:

Vocabulary-building: Needless to say, many of the words that came in the story were new to the children. They now had a new vocabulary of English words.

Meaning-making: The story provided a context to learn the language. While the students learnt the new words, they learnt their use in meaningful sentences.

Learning spelling: As against a dull dictation by the teacher, while they copied the words, the students tried to understand how they were spelt. When they said *Bingo!*, I had already rubbed the word from the blackboard, so they had to spell it out the way they had written it down.

Pronunciation: English, as we all know, is tricky when it comes to pronunciation. Hearing people speak in English is not common for these children. While they listened to my reading, they also tried to read out and pronounce the words themselves.

Original thinking: Children were able to derive different ideas from the stories. While one said, 'Good deeds lead to good rewards', another observed, 'Caring is important, be it for humans or animals.'

In the end, it was an hour judiciously spent. Children showed enthusiasm and were completely engaged in learning. As I was about to leave, a girl asked me if I would come back the next day. I said only if all of them wanted me to and all the children shouted in chorus that they wanted me to come to class every day and play this game. That, for me, was the best moment of the day.

Play can create a non-threatening environment for teaching-learning in the classroom. While it enables a teacher to teach something new and connect better with the learners, carefully designed play can even act as a tool to diagnose learning challenges in children. Play ensures that children involve actively, learn effectively, and reflect on their own performance in subtle ways. Play can teach lessons beyond academic subjects, such as being competitive and sporting, working in teams and most importantly, it teaches learning from failures. Play has this unique ability to combine learning with life situations. As we all wait for this pandemic to end, and for normalcy to return to all aspects of our lives, including classrooms, games such as the one mentioned can be planned to make language teaching-learning engaging and meaningful for teachers and students alike.

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Folk Games in Learning

Salai Selvam

As a child, I grew up playing folk games happily. I am sure these games shaped my personality and added happiness to my life. I still play these folk games with the children around me. In Tamil society, folk games are a part of people's daily life. *Sangam* literature also speaks of countless folk games for children that they played for hours without getting tired; of childhood spent singing, climbing trees, running, hiding, jumping, blindfolding, rule setting and planning for games. Some of these interesting games in Tamil are, *kula kulaiyan mundirika, samngili pungili, tic tic, kannaa muuchi re re, pallaanguzhi, tri tri bandham, ottaiya rettaiya, chungik ka, kabaddi and daayam.*

I witnessed the active involvement of parents in folk games when the Pebble Library (*Koolangal* Children's Library, Madurai) organised a folk games festival for urban children and their parents. Parents seemed very happy in teaching these to their children. As a teacher, I used these games in different forms with my primary school students.

The guiding principles of the National Curriculum Framework 2005, such as connecting knowledge to life, ensuring that learning shifts away from rote methods, enriching the curriculum so that it goes beyond textbooks, and overall, promoting joyful learning, especially in the primary classes, are aligned to use of games in learning. I am sharing my experiences in using folk games in the learning process of the Tamil language.

Folk games for teachers

The District Institute,[i] Puducherry, organised a 'Folk Games Festival' for our Voluntary Teacher's Forum (VTF)[ii]. As a part of it, we created a space where teachers could play folk games of their childhood, such as *thayam, gundu, kitty, nondi, pallaanguzhi, kolakolaya mudhinrika, sangkili pungili kathava thora*, colour-colour etc. Materials, like *goli gundu, dhayakattai, Kattam* and stones for *kallaangal* were used for playing these games. These games involve a lot of conversations and songs.

The festival began in the morning and each game was initially played for around 30 to 60 minutes. After that, the teachers chose the games that they liked. Some continued to play the same game over and over; others tried out various games. Soon they formed their own groups. The post-lunch session was for experience-sharing.

Teachers' reactions

- They felt nostalgic. These games took them back to their childhood.
- They were unwilling to stop playing because they were enjoying themselves.
- They recollected the manner and rules of playing the games.
- They felt sad for the current generation who have lost these folk games.

Experience-sharing by teachers

Teachers were excited to share their experiences and learnings in the VTF which created cross-learning. In trying to cover the syllabus, they had not realised that these games could add value to their teaching-learning process. This sharing helped them to link their teaching processes with these games.

In addition, the Physical Education (PE) teacher shared and requested primary teachers to allow the primary-school children to play regularly not only for their happiness also for the development of their fine motor skills. After class V, students have systematic sports and games, dedicated periods for these and district level competitions etc., but primary classes do not have these. He also added that folk games which they play on their own will support the students in the development of life skills like working in a group, leading a team, taking decisions and will ensure the development of multi-talents and intelligence naturally.

Teachers excitedly shared their experiences and borrowed books on folk games and collected materials for games, such as *pallanguzhi, dhayakaddai*, sticks for *kitti* from our Teacher Resource Centre. After this workshop, we received the following responses from teachers:

- I used the *kallangal* game for observing rules.
- I conducted a folk game festival in my school.
- We allotted a period for a week to play a folk game in my class. Children are busy with those games.
- We did a project to collect folk game songs.

Language acquisition through folk games

We also organized a session on games in language teaching and learning for teachers. In this session, we took the folk game of *kabaddi*, which is a traditional game of Tamil Nadu, to demonstrate language acquisition through games. Teachers happily shared their experiences of playing *kabaddi* and tried to connect the game with language teaching. They prepared sample plans for their classrooms, such as:

- Collecting *kabaddi* songs from their local areas
- Giving students these songs to read and sing
- Playing *kabaddi* in school (to focus on experience and dialogue)
- Compiling rules of the game
- Compiling experiences of the game with parents and neighbours
- Drawing scenes of the game
- Adding new lines to the existing songs
- Presenting all these activities in the classroom, school and to parents and community

Bringing children's life experiences into the classroom is a significant step forward in the teaching-learning process. We were able to involve the community in addition to language learning in the classroom. Focusing on this game motivated the teachers who were able to plan children's adaptive activities in the language class and take them to the classroom so that every game the children played could be modified for the classroom.

Use of folk games in the classroom

Folk games can be used for:

- Language development (conversations, rule setting etc.).
- Development of mathematics skills (games like *thayam, pallaanguzhi*, etc.).
- Classroom management: For example, a game like *kulakkulaiyaa mundrika*, which is played by children in the age group of 4 to 10 years all over the state. Children sit in the circle, sing a song together, observe the person to catch, and then run. Up to 20 children can sit in a circle and play this game. This game can be used in many ways for classroom management, like creating a fear-free environment for learning.
- Creating a friendly environment in the school by allowing children to play folk games that they play in their community in school too.
- Helping children learn to create lists and make plans.
- Creating fear-free learning by scheduling time for playing such games.

In summary

Generally, I have conversations with children on which games they play and which they enjoy most. The children feel very happy sharing the details of where and when, who won the game, how he/she cheated, the rules, what their 'useless' leader did etc. These informal discussions support their personality, especially helping a child to get into a team, supporting them to learn a particular skill. I tell them to play as much as they want. But I also explain to them why they should play the games which they do not like, and also why they should play with those they do not like. I tell them to take time out to read stories because stories are like games with many interesting things to learn and explore. I extend learning through games or dialogues on games because games help in developing children's Multiple Intelligences (MI), as suggested by Howard Gardner.

As a teacher educator, I suggest that teachers choose games that students enjoy, and which are suitable to their local context. Teachers can allow students to play a few games in the classroom before or after lessons or when they finish some difficult tasks or just to create a happy mood.

I am sure we can use folk games as the focal point of elementary school learning activities for happy, natural learning; respecting children's social experiences and; learning through play. What is needed today is for teachers to discover that children's playing experiences include all the hidden mathematical functions, elements of language skills and elements of personality. We can foresee this idea of folk games in classrooms dovetail in achieving early numeracy and literacy.

Endnotes

i District Institute (DI): The aim of Azim Premji Foundation DIs is to improve the learning levels of children by focusing on building professional capacities of teachers, head teachers and functionaries. This is facilitated through multi-modal engagements - informal learning groups, short discussions, Teacher Learning Centres (TLCs), workshops, school visits, exposure visits etc. Teachers are provided with access to resources like books, teaching and learning materials, computers and internet connection, laboratory equipment and material through a wide network of TLCs.

ii Voluntary Teachers' Forum (VTF): Building teacher capacity through continuous professional development is at the centre of this initiative of the Azim Premji Foundation. The VTFs are an integral part of its multi-modal and integrated approach towards continuous teacher professional development.

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Play and Learn | Games for Classrooms

Shehnaz D K

Children's learning and playing go hand in hand. Even before going to school and after starting school, children learn a lot while playing. However, after a certain age, though learning continues, playing gradually decreases. In school too, activity-based learning is more prevalent up to the primary and upper primary classes but is totally missing in higher classes.

We all know that learning becomes easy when the environment is stress-free and there is no academic pressure. If we use the play-way method in teaching, children acquire mathematics and language skills efficiently.

Some mathematics games

I would like to share some common maths games that children of the primary and upper primary in my class play. In primary classes, children play these games orally first, and later, in written form to do better in addition-subtraction and multiplication-division.

Calculation game

In this game, three to four children play in a group. They have three dice – two with numbers and one with symbols (+, -, ×, ÷). Each child starts by rolling the three dice together when it is his/her turn, operates according to the symbol, tells the group and writes the answer in his/her notebook. It is marked (√) if the operation is correct. But if it is wrong then it is marked (×), corrected with the help of the group and then written in the notebook.

Children need to remember one rule here which is that when they have to do addition and multiplication, they can write any number first, but when they get the symbol of subtraction and division (-, ÷), the bigger number should be written first. Sometimes, children are not able to do division, so they leave it for discussion with the teacher. At the end of the game, they see for themselves how many times they rolled the dice in a day, which operations they did and how many operations they completed correctly. In this activity, children learn with the help of each other.

Shopkeeper game

In this shopkeeper game, children not only buy and sell goods, but they also make bills. All the children, irrespective of their interests, enjoy the shopkeeper game and it has a lot of learning opportunities. There are children, whose parents do some business (run a grocery shop, sell vegetables etc.); they are used to helping their parents in their work and they teach others about how to list items, how to calculate etc.

Children prepare for this game themselves. They bring their toys and other items from home and sell them. They decide the price for these items and make bills for the goods sold. The older children calculate profit and loss occurred in the transactions. With this, children also learn the calculation of half, three fourth, one fourth etc.

This game is played in different ways at all levels from classes I to VIII. Once in class VIII, children also enjoyed arranging 'clothes sale' or discount on clothing. They had the photographs of clothes and put stickers on them displaying the original price and the discounted price of 10 percent and 15 percent. This activity enabled them to correct a lot of mistakes in solving problems based on profit and loss, discount and percentage.

Measurement game

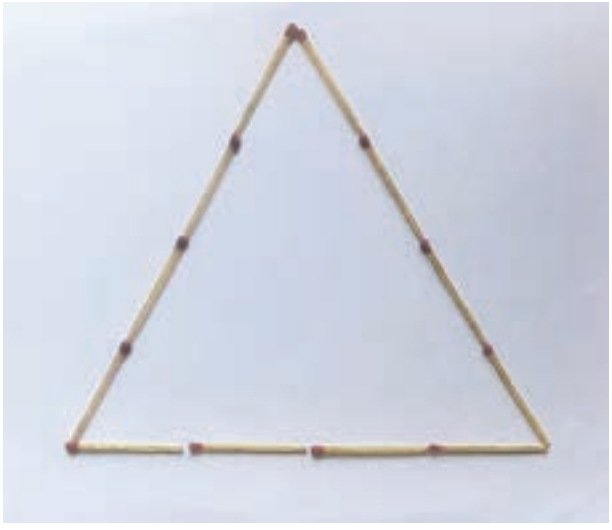
Children play some special games in the upper primary classes to learn 'measurement'. They draw long lines on the ground, measure them with a scale and note down their readings. They also play long jump by turns and measure the length of their jump in metres and centimetres. They gradually try to increase the length of their jump.

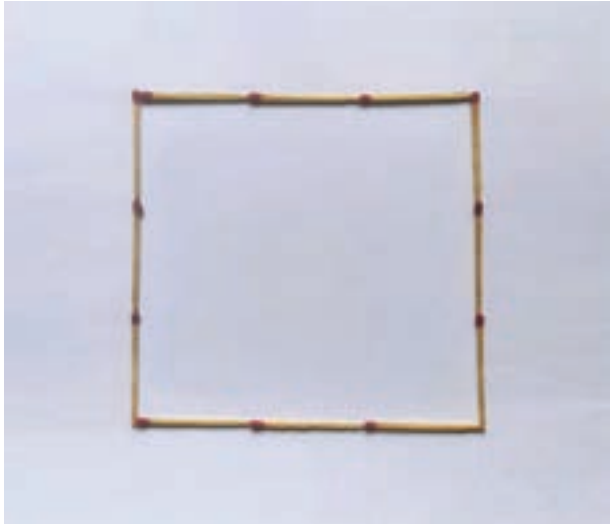
Young children love the long jump. Usually, they mark the distance and see who jumped the longest. But when they are learning how to measure, they draw the number line on the ground and write the measurement in centimetres as 0,10,20,30 on it. They mark a line from where they start their jump (0 or zero cm) and write the total distance covered in centimetres. They also write 'one metre' at 100

cm on the number line and if someone jumps up to 115 cm, then they easily understand that is one metre and 15 cm long.

Shapes and perimeter

In this game, children bring three or four equal lengths of threads (12 or 18 cm) from home to understand the concept of perimeter. They sit in groups in the class and make different shapes (square, triangle, and rectangle) in their notebooks. Then they discuss the figure that looks bigger. But they observe that the outside measurement is the same for all the figures because they have made different shapes with the threads of the same length. They also make similar figures with sticks using three sticks for each side of a square, four sticks for each side of a triangle and four and two sticks for the sides of a rectangle. When they see that each figure is made up of 12 sticks, then they understand that the outside measurement is the same for all.





Oral calculations

For oral practice, the class is divided into two groups. Group A asks group B to give the answers by doing oral calculations. Children (of classes VII and VIII) frame the questions themselves, like:

1. What is half of 700?
2. What is the total of two notes Rs 500 and four notes of Rs 100?
3. If 70 is added to 280, how much will you get?

Children take the help of elder siblings, write down questions and ask in the class. Some children who have been learning like this for two to three years, start making word problems:

1. If a pen costs Rs 12, then what will be the cost of 12 such pens?
2. I went to the market with my mother. Potatoes were available for Rs 20/kg. If my mother bought one and a half kilos of potatoes, how much money did she spend?

In this way, children try to formulate questions and solve them orally. This helps them to think and calculate. But in this activity, the whole group is not active, only the children who speak more often ask questions and give the answers quickly. Children who are quiet do not get a chance.

Some language games

Reading fun

When children cannot find a book they want to read or want to play during their library time, they have the option to play games around reading. One of them reads from a book but omits some words and the others have to supply these.

In another game, each group is given a letter or a word, and they have to make new words using those. The group, which makes the maximum number of words, wins.

Writing letters

Children write letters to their friends. They write multiple things in different ways, which is an expression of their emotions. They write about the food they like or make or want to eat. In the same way, they sometimes write about all the good or bad things that happen in their homes. Or how they plan to celebrate a festival.

Similarly, they create games of their own for oral expression. They give a topic to each other and speak about it for two minutes.

Conclusion

Even outside the school, we see how children, both girls and boys, love to cycle. It gives them confidence and they learn various things, like how to fix the chain, check the brakes and air pressure, how the cycle moves in water or sand. When they learn to swim, they overcome their fear and enjoy the activity which also teaches them about speed, body movements and lung strength.

I have talked about these games because if we carefully look at the games played inside and outside the classroom, we find that there is joy in learning but no pressure on the child. Children enjoy learning if the games are built around their willingness, their rules, and comparisons that are only with their own selves.

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Play Goes Digital | Role of Early Childhood Educators

Simranjeet Kaur

The age of a child determines the kind of play he/she will engage in, for example, solitary play, constructive play, parallel play, and so on. Many of these conceptualisations tend to consider play as a universal construct unfolding in predictable ways as per the child's biological age. However, what is missing from this thinking is how the increasing access to new media technologies and tools, such as tablets, mobile phones and computers, has altered play opportunities for children.

In the last year, with the pandemic imposing restrictions on mobility, digital play has become firmly entrenched as an alternative to traditional play, flagging the concerns of teachers and parents regarding increased screen time. While these are genuine concerns, it may not be wise to reject the idea of digital play altogether. Instead, we must think of it as another form of play that children need to savour in moderation.

In this article, I aim to introduce the readers to digital play as a novel and emerging play in the early years. I intend to provide a primer to digital play and explain its benefits in early learning. Lastly, I elaborate on the role that early childhood educators can play in fostering digital play in the classroom and beyond. Keeping in mind the cruel reality of the digital divide and unequal access to digital devices that pose a barrier to digital play, I attempt to make suggestions that do not require sophisticated technologies.

Digital play and learning

As teachers, we have students interested in understanding topics such as the solar system, dinosaurs or airplanes. With limited class time and too many things to cover, these explorative topics tend to take a backseat. In situations like these, technology can come to aid and enable the child to traverse a different world.

Immersive digital play, or simply put, play that is self-directed, provides children with an opportunity to fulfil their quest for knowledge while being at 'play'. Based on the premise that young children are active users of technology, digital play provides them with opportunities to engage with digital games, puzzles, blocks, open-ended sandbox and pretend games. These encounters enable children to indulge both in imaginary as well as real-life situations. It is this potential of digital play to connect the social and imaginary worlds of the child that is its essence. Digital play can be of many different types depending upon the kind of application or device used (see table 1).

Just as traditional play supports learning, digital play enables children to develop a broad set of skills. A study by the Lego Foundation (2020) with around 3500 respondents from South Africa and the UK found a positive correlation between digital play and learning. The researchers found that learning through digital play can be both intentional and unintended and that playing online games supports holistic development among children in the following ways:

1. It can lead to gains in subject knowledge where children have opportunities to play games on mathematical concepts, phonemic awareness and word-building. Playing games that relate closely to the school curriculum fosters learning.
2. Some games allow multiple players and provide an option to children to play with their peers both online and offline. This enhances collaboration among them as they work together towards a common goal or the solution to a problem.
3. Online role-playing games provide the option to children to choose from an array of digital avatars, such as shopkeeper, farmer, teacher, beautician and so on. Playing such games can help children understand the everyday tasks and challenges of people from diverse walks of life.
4. Digital play leads to improvement in concentration, memory and problem-solving skills and enhances creativity among children. It also helps build patience and the need to wait for one's turn.
5. In a world mediated by technology, digital play provides the first lessons in digital literacy to young children, which may be helpful to them in future.

6. Playing on digital devices also develops a sense of independence and agency among children as they navigate various apps and make decisions.

Choosing an application

With a software update here and a new app (application) there, the digital world is ever expansive and exploding. Given so many options to choose from, it is natural for teachers to feel confused in selecting an appropriate app. A few tips that can help them pick appropriate apps for their students:

1. If the app is over-structured, repetitive and predictable, it may offer minimal choices to the learners and hinder their imagination.
2. The app must provide an opportunity to the learner to manipulate, explore and unleash his/her creativity. The thumb rule for selecting any app is to ensure that it allows children to 'create' and not simply 'consume.'
3. Applications that allow collaboration and are not limited to a single-user interface are better as communicating and engaging with friends, peers, family members, and teachers in digital spaces is equally essential as otherwise.
4. The design, setting, characters and language should not contain hidden biases nor promote stereotypes.
5. Given the concern that digital play does not involve physical activity, you may want to select those that require some physical movement in their design interface.

Role of teachers

Teachers have to assume multiple roles when introducing and engaging with digital play. One of these roles can be that of a facilitator who provides technological resources and spaces for children to play digitally. Or it may be of an instructor who gives direct instructions when children need to perform a specific task. It can also be that of a supporter who provides encouragement and feedback to children as they play online. Whatever the role, the first and perhaps the most essential step is for you to be friends with technology and take an active interest in exploring it. A teacher must explore the app/game thoroughly before recommending it to the learners.

Encourage students to play alone or in pairs and groups depending upon the time and availability of resources. Above all, take this opportunity to talk to the students about being safe in an online world and always discussing with an adult before they download any new app. Teachers must also take this as an opportunity to educate and support parents to employ technology in developmentally and contextually appropriate ways with their children. Technology is here to stay and so let digital play be a first step for our children to embrace it.

Table 1. Types of digital play

Types	Description
Exploratory	Involves children in first-hand experiences of exploring, experimenting and problem-solving using digital devices to help them become more confident at using them. Giving students a smartphone or a tablet to take pictures of their environment can classify as exploratory digital play.
Imaginative	Having children incorporate digital devices to introduce them to a theme or a topic they have not experienced before. For example, helping children view images in 3D (available free on Google) to evoke their imagination or letting them play out a scenario from an app.
Game-based	Games or apps built around various subjects, including science, mathematics, literacy and language to foster subject-based learning, critical thinking, and problem-solving.
Creative	Provides opportunities for students to engage in apps that allow them to produce digital artwork, drawings or movies. These may be included as a part of students' portfolios and can foster social-emotional development.

Table 2. Some game/app suggestions

Key development area	Suggestions
Game-based learning	An Indian app for early learning, *Kutuki* offers a range of topics in regional languages. You may also stick to popular choices such as *Minecraft* and *Scratch* to offer fundamentals of programming, teamwork and problem-solving.
Creative digital play	*Microsoft Fresh Paint* and *Sketches* are free apps for children to draw, sketch or doodle online. For photo editing, the *Pixlr* photo editor has preloaded image tools for children to edit their images.
Diversity	To introduce children to topics such as refugees and diversity, apps such *Our Global Kids*, *Against all odds*, *Darfur is Dying* are useful.
Digital storytelling	Developed by Laureate Professor Marilyn Fleer at Monash University, *Conceptual Playworld* helps educators to develop imaginary scenarios inspired by a children's book or a fairy tale for children to go on imaginary journeys and solve challenges while being at play.

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Play in the Language Class

Smriti Rathore

Play is an indispensable part of our physical, mental, and social development. While including play in my teaching, I have found that play enhances the abilities to listen, respect rules decided upon and have control over one's emotions. To make my language class lively, I took the support of language games that can increase the comfort and confidence of learners in the acquisition of the English language and give them ample opportunities to make mistakes, experience, learn and apply when and where needed. The advantage of playing a language game is that learners do not feel disappointed about losing because everyone is in the same phase of learning. Also, as most children cannot help correcting each other, learners get quick peer feedback. As a teacher, it is my responsibility to provide my students with the best possible resources. I am sharing a few of my experiences of using language games in the classroom.

Games for early grades

In class I, I began a read-aloud session on the story of soap. As per my lesson plan, I used picture flashcards, voice modulation and a little drama. After the session, I asked the students to tell me the words that they remembered from the story. One by one, students started naming the words and I wrote down each word with a serial number on the blackboard. Then I made each student get up serially and call out a number, starting from the number one – this became the number assigned to each. This done, I began calling out one number at a time and the student with that number had to stand up and read out the word with the same serial number on the blackboard. Here, learners who were in the phase of learning letters were asked to point out the letters alone or take the help of a friend.

In continuation, the next language game was the 'Memory game' - a common language game that students really enjoy. In this, students close their eyes, and the teacher rubs off a word from the blackboard, so when they open their eyes, they have to guess the word that has been erased. It takes five to six attempts by students to guess the correct word because to do this, firstly, the student needs to remember which word has been removed and secondly, he or she needs to be aware of the (approximate) pronunciation or spelling of the word to express it. But as soon as the blackboard is left with fewer words, the excitement of the students is clearly visible on their faces. The answers are prompt, and the number of attempts reduces. Some students have pictorial memory and fit the image of the words on the blackboard in their minds. But they must also know how to articulate it correctly.

'The vast majority of children enter school with vocabularies fully fit for everyday life, with complex grammar and with deep understandings of experiences and stories. It has been decades since anyone believed that poor and minority children entered school with "no language"' (Labov, 1972; Gee, 1996 cited in Gee 2002). So, when learners come to school, they come with a large vocabulary and the role of the school is to make their speech and writing clear and expressive by enriching their vocabulary with meaningful contexts and deeper learning. Naturally, it is not possible to teach all the words of the texts. I think it is also unnecessary. Choosing words wisely from the texts and making students use them in a meaningful manner is more important. The language games I mentioned above are more appropriate in the early grades when we deal with nouns. In second language acquisition, nouns are all equally new words for all learners.

More complex games

For the students of class IV, I created a game that is inspired by the *Dog and the Bone* game. I divided the students into two groups. The groups stood facing each other and each child was given a number. I wrote down words from their texts on bits of paper and scattered these in a circle between the two groups. I would call out a word two times. Then, I would call out a number. The children with that number from each team would step forward

and search for the word I had called out. Whoever found it first, would pick it up and read it aloud. The child from the other team would try and make a sentence using the word. Two other members from either team would also get a chance to make a sentence using the word.

Each student comes up with a different sentence in a different context. Some use the word in a positive sense, some in the negative. They even try to use the word in a question. For example, using the word 'sound', the children made these sentences: 'The koel has a sweet sound,' 'I can make the sound of a tiger' and 'What sound does the car make?'

'The variety of contexts in which words can appropriately be used is so extensive, and the crucial nuances in meaning so constrained by context, that teaching word meanings in an abstract and decontextualized manner is essentially futile and potentially misleading…' (Situated Language and Learning: A Critique of Traditional Schooling by James Paul Gee).

Learning a word with its one dictionary meaning will not really help in expanding a child's vocabulary as a particular word will have different meanings in different contexts. For example, the word 'star' can have several meanings when used in different contexts: 'Stars are not in my favour,' 'Look at the stars shining so brightly', 'The box is star-shaped', 'She was the star of the class'.

The meaning of a word differs in different contexts, but students usually do not make sentences with a word consciously with this thought. Once we get multiple sentences from the students, their learning and our teaching become easier as they understand how the same word can mean different things. To succeed in this, children need to be provided with ample opportunities to explore words in speech and writing.

Reflection

During this lockdown period, I read a book, *Situated Language and Learning: A Critique of Traditional Schooling* by James Paul Gee. In the book, the author deals with the issues of language, learning, and literacy. The focus of the book is on how the 21st-century video games/ games/ digital world can aid language acquisition for school students.

In a video or digital game, we do not learn all the symbols or signs of the game at one go but gradually start picking the key factors/steps to understand and play better. In the same manner, when we introduce language to students, we need to move from simple to complex, from known to unknown. Therefore, my strategy has been to read a book/ text/story and then conceive and play language games based on it, which helps students to better understand the vocabulary in different contexts. Gee makes a point that while teaching language we start teaching the system of rules and it does not work. Our mind works best by making associations.

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Language Development through Imaginative Play

Vaishnavi V

Except for when she had to look after her one-year-old cousin, wash clothes or scrub utensils, 5-year-old Mona was always outside her house, playing. One could easily identify Mona's actions as some form of play, be it by herself or with her other playmates. For someone who generally shied away from having any kind of conversation with me, I saw words flow like water from Mona's mouth whenever she argued and negotiated with her playmates about taking turns with the jump-rope.

Mona built make-believe worlds and transformed from one thing into another, while still retaining a good bit of herself – a giant old tree to an angry fruit vendor to a lazy doobi (buffalo in Bhili language) in the river and so on. She uninhibitedly produced sounds of animals and birds. Her body was free and fluid, moving in whichever way she wanted it to, as opposed to how she might be expected to seat and present herself in a classroom or while she was under the watch of elders and teachers. More than anything, her presence in her own play could be felt.

Learning ought to be a liberating process for children, in the sense that it should make room for everything, from confusion to clarity and all things in between. It is debatable as to whether there is a better vehicle than play to facilitate this sort of learning process. Buzzwords such as activity-based learning, joyful/playful learning, used frequently in the domain of education, all essentially talk about the need to have play at the centre of pedagogy.

We have often come across the idea that children make sense of their world through play and that it helps to bring to the surface, much of their latent potential. Out of the many skills which children acquire naturally through play, I would like to share my thoughts on how the area of language development is linked to imaginative, pretend play in young children. My limited understanding of this was developed further through my interactions with young children during the community-based engagement in the post-lockdown phase of 2020 when the Madhya Pradesh government started a programme aimed at resuming teaching at the village/community level, while regular schools remained closed. These engagements were carried out in small groups, in village Shahbaspura (where the majority population comprises the Bhil tribe), usually in a common area that was easily accessible to children.

We know that child-led pretend play[i] is believed to be valuable in itself, and that several psychologists, Jean Piaget and Lev Vygotsky among them, and researchers in the domain of early childhood education have discussed at length its contribution to the social, emotional and cognitive development of children. I wanted to explore how imaginative play, when extended to a guided environment with an adult facilitator, could support the development of language competencies. In this piece, I discuss the learnings from my observations of young children engaging in imaginative play.

Mona's make-believe world

One of my favourite memories of Mona is of the day when I walked in on her 'being' a bird, playing by herself. Arms spread out and wide, she pretended to glide through the sky. Then at once, she brought a closed fist to her forehead, as though to suggest that something flew by and hit her. Our little bird was knocked down. She lay on the ground as still as she could be, with her tongue slightly sticking out, adding some comic relief to her act. By now, I had already predicted what would happen in her story – a kind-hearted creature would come and rescue our bird from her plight. But what I witnessed caught me by surprise. Other young children started to join Mona's act, lifting the bird (Mona), carrying her around and cheering in celebration. Her older brother, Baadal, pretended to remove the feathers from the bird and all the children together placed her on a *charpai* (woven bed) and announced that they were going to cook her for lunch. Mona could no longer hold her laughter and burst out giggling, bringing the pretend play to an end. Only much later did she and the other children in the village explain to me how it was very common for the boys of the Bhil community to shoot birds and rabbits with their slings for meat – a cultural practice that

continues among this archer tribe. This instance goes on to show that young children, in their unique ways, using their own body and voice, are always retelling stories from their everyday lives in one form or the other.

It goes without saying that the story they had together woven, held great cultural significance. Moreover, it was not merely an imitation of their reality but an interpretation of it; what they presented was a slice of the life they lived, peppered with imagination.

Observing Mona and her friends create and function in their own imagined world had me thinking about how emotional connection and imaginative involvement during play allows scope for free, uninhibited talk. It further encouraged me to think of ways in which to incorporate such forms of play in order to make language learning more anxiety-free and fun.

Guided intervention

Following this, a guided intervention was planned which aimed at using imaginative/dramatic play to enable children to actively participate in meaningful language experiences. This was tried out with a group of children, mainly *anganwadi* goers and I-III graders, who either had no or very little exposure to schooling.

The first part of the intervention involved describing broadly a situation to the group through conversation and talk and asking the children to behave in a given situation in the way they wanted to. It was ensured that the situations given were familiar and contextually relevant to them, for instance, a rainy day, the jungle, bazaar, evening at the *mela* etc. When the situation of a rainy day was given, it was interesting to see how the many meanings of a single situation were brought out with each child responding to it differently. Some ran and pretended to take shelter under a roof, some used sticks for umbrellas, some reached out their hands as though to embrace the rain, and there were also some who pretended to clear out clogged water from the house. Some children played by themselves, while others figured things out together. Some did their act in silence, whereas others used sounds and dialogues.

After indulging in these play situations for about 15 minutes, we would gather to talk about each person's act. This attempt was to initiate them into the practice of self-reflection, even if it was just as much as a line or two. Over one week, they slowly warmed up to the practice, sharing more than they did earlier. With some amount of scaffolding through open-ended questions, emphasis on vocabulary, encouragement and appreciation of their narration, children were seen to employ the following while retelling their act, which seems to hold some relevance in the context of language learning:

Use of onomatopoeia

The way children talked about the sounds they naturally associated with the things around them, such as thunder and rain, and the rustling of leaves created opportunities to discuss these in greater detail. As a group, we discussed how 'normal' rain sounds different from the rain that falls on rooftops or how an angry dog sounds different from an injured dog.

Putting themselves in the shoes of others

While playing out these situations, they were essentially trying to embody characteristics and features of another person, creature or thing. For instance, the child who played the role of lightning, chased the others around and threatened to *strike* them which was an imaginable and original metaphor of how lightning works and can make one feel.

Narrating their act in a sequence

The children would sometimes share personal experiences in the form of stories related to their act. The girl, who pretended to drain water from the house during the rainy-day situation, narrated the real incident which her act was based upon, during her sharing.

These observations suggest how imaginative play of this nature can lay the foundation to developing various literary and linguistic skills, such as narrative ability, the use of complex language (talking of the past, future) understanding literary devices (monologues, metaphors, analogies), symbolic representation and interpersonal communication.

In summary

This guided form of imaginative play was later extended to other group activities where one group played out the scene and the other only observed and shared their interpretations of it. It was also tried out as a means to introduce them to new children's books since stories that are experienced through enactment are better retained in memory. Children's responses, narratives, newly learnt vocabulary were all written down and drawn on

charts that could be revisited. As the writings on these charts were easily recognisable and held meaning at a personal level, children (II and III graders) were able to decode these faster.

In conclusion, one could say that while it is important that children have their own worldviews, it is equally important that they have the means and space to voice their worldviews. Imaginative play, in this context, can act as an appropriate tool to facilitate this, while at the same time, providing adults with a lens with which to understand children.

**Names have been changed to protect identities.*

Endnotes

i Pretend play, also known as imaginative play or symbolic play, starts in early childhood and involves the child creating make-believe realities and enacting different people, animals, or places. Objects around them are used as symbols to represent their imagined realities.

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Teachers too Need to Play

Vivek Sunder Pillai

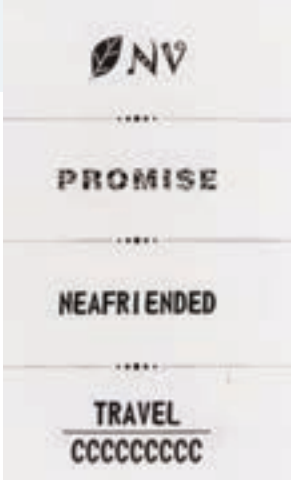
A three-month Continuous Engagement Programme (CEP) for teaching English with teachers of one zone in Puducherry was in progress. Schools had just resumed after many months of lockdown, and we were happy at the prospect of having a face-to-face workshop with teachers. We followed up the first session with school visits and scaffolding. But after the second session, before we could even gear up for school visits, schools were closed again.

What should we do to engage teachers further when they had not yet been able to implement what they had already learnt? What could be done about the learning gap that children would face when they return to school? While we were pondering over these and many other such questions, we thought of playing some language games with teachers just to keep the CEP *WhatsApp* group active. Although we had earlier shared some teaching ideas and invited teachers to share theirs, there had been scant response from the teachers. Games, we thought, might create some excitement in the group.

I am sharing how these language games gradually got the teachers interested and how more and more of them began to participate.

Rebus puzzles

Rebus puzzles are pictures made with letters and words. We shared a few of these in the *WhatsApp* group, such as: *If the answer to the first one in the figure is 'Green with envy', what do you think are the others?*



Two teachers were quick to respond. So, we shared some more of these puzzles. Three more teachers joined in. We started with easy puzzles to boost their confidence and encouraged all answers with positive smileys and *gifs*. And when they were wrong, instead of explicitly stating so, we gave clues to help them arrive at the correct answers.

Language riddles

The next day, we shared some language riddles with the condition that the respondents should not use the internet to find answers.

Can you try to answer some of the riddles?

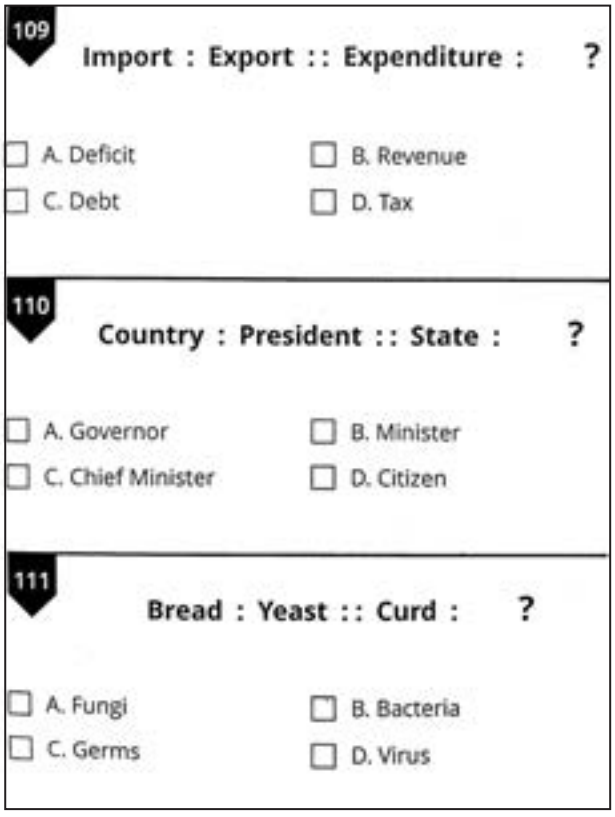
1. Which four days of the week start with the letter T?
2. Which word in the English language is always spelled incorrectly?
3. What is a word made up of 4 letters, yet is made up of 3? Although is written with 8 letters, and then with 4. Rarely consists of 6 and is never written with 5.
4. A man says, 'Brothers and sisters have I none, but that man's father is my father's son.' Who is he pointing to?

Two new teachers joined the fun. And as they solved the riddles, we gave some more, gradually increasing the level of difficulty.

Analogy puzzles

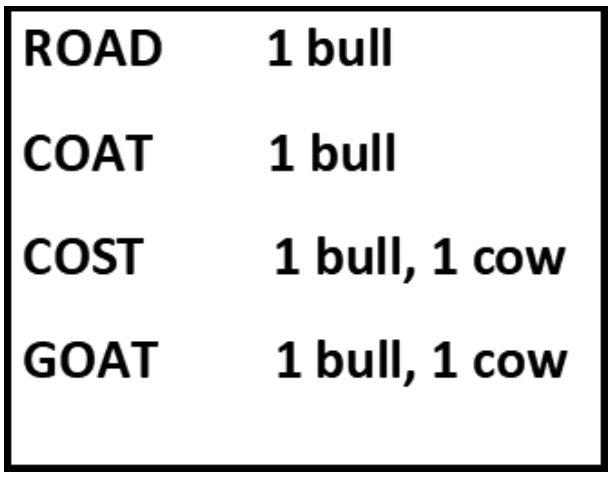
Since the teachers were showing interest, we fixed a convenient time so that everyone could join and play together. We gave them some analogy puzzles and permitted them to use the internet since the answers would not be explicitly available; they would still need to apply themselves. These puzzles were a big hit and the teachers continued to play for more than an hour. In the end, they thanked us profusely for the 'brain-boosting' puzzles.

Can you try answering the ones below?



Cows and Bulls

We made a video of how to play *Cows and Bulls* and shared it in the group. If a 'Bull' is for a right letter in the right position and a 'Cow' for a right letter in the wrong position. *Can you guess the word based on the scores given in the figure?*



The next day, we started the game with simple three-letter words. Once they got a hang of it, we gave the teachers four-letter words to guess. They found it difficult, but as we supported them with clues, they cracked these. Now they were hungry for more. Finally, we introduced them to the board game, 'Mastermind' in which instead of words, colours are used, and they could also buy the game from the market and play with their families.

What's the good word?

We started by making teachers guess simple words, like *tram* and *windmill*, and then moved to more difficult words, like *irresponsible* and *witness*. Teachers loved this game so much that we played it again the next day; this time, teachers thinking of the 'good word'.

If these are some clues: amusing, comical, funny, witty, joke; can you guess the good word?

By now, there were about seven teachers who joined the games off and on. To encourage more teachers to join in, we shared the rationale of playing such games: these would equip them with tools and ideas that they could adapt to the requirements of their classrooms, apart from these being fun, interesting and educative for the teachers themselves.

Word-building games

We gave the teachers the first and last letter/sound and asked them to come up with one-syllable, two-syllable and three-syllable words using them. *Can you guess the word I have in mind with these clues? It includes the sounds /s/ /t/ and /m/ and it is related to duty.*

Another word-building game was about creating more words from a given word by changing/adding/deleting a letter. For example, we gave the word 'TEAM' and asked the teachers to come up with five more words changing one letter at a time. So, a teacher came up with TEAM-BEAM-BEAT-BOAT-BOOT-HOOT and then strung them together to make: The TEAM followed the HOOT sound in a BOAT with BOOTS and BEAMED with the BEAT.

The outcome

Within just two weeks of playing these and other such games, we could sense the impact. These six to seven teachers who were regularly involved were more friendly than before. When we spoke to them over the phone there was excitement in their voices. One teacher said that the games made them use their brains after a very long time. Another said that she looked forward to these games every day. A third asked to reschedule the games since she could not participate at the given time. And a fourth said that although she was not

able to participate *live*, she followed the games later when she had the time. The participation of these teachers in the third and final session of CEP which happened online was perceivably better than earlier. They shared their classroom experiences, actively interacted during the session, and shared positive feedback. It was evident that these games had struck a chord with them and had ameliorated our relationship.

My reflection

Although we work as teacher educators, our concern is largely for the students. And understandably so, since we have the potential to determine to a good extent not only the quality of their present (considering that they spend half their waking hours in school) but also of their future. We may not have the same concern for the teachers since we see them as independent adults in secure government jobs. So, it is quite possible that we perceive teachers as the means to fulfil our end of a better learning experience for students. But the above experience shows that it is not so.

Instead of seeing teachers as persons who need to change their beliefs and practices, we need to think of them as autonomous, rational individuals who have the potential to learn, unlearn and relearn through observation and dialogue. They are not mere professionals out to deliver, but rather human beings juggling multiple responsibilities and dealing with manifold needs just as everyone else. Among their needs is the need for breaks from work, some fun and play even if it is just another way of getting more conversant with the subject that they teach.

Answer Key

Rebus: Broken Promise; A friend in need; Travel overseas
Riddles:Tuesday, Thursday, Today and Tomorrow; Incorrectly; It does not need an answer since it is not a question; His son
Analogy: B, A, B
Cows and Bulls: SONG
What's the good word? Humour
Word-building games: Must

Resources

Cows and Bulls game: https://youtu.be/ydpnUviPPWE

Sources

Rebus puzzle: Rebus Puzzles, Jainco Publishers (an imprint of Jainco Enterprises), Delhi
Language riddles: From different sites on the internet
Analogy puzzle: Analogy Puzzles, Jainco Publishers (an imprint of Jainco Enterprises), Delhi
Word scramble: https://www.treevalleyacademy.com/back-to-school-unscramble/

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Games for the Science Classroom

Shambhavi Naik

I have always found biology fascinating. The science of life itself is magical – how a single cell forms an entire human being, how bees communicate, how a plant responds to sunlight. In 2016, in a bid to inspire others to study biology, I decided to teach *evolution* to students of Shri Devi Sateri High School – a school in rural Sindhudurg (Maharashtra), close to my native village. I have always felt that the approach of teaching theory in classroom sessions is ineffective. Not only is it difficult to keep students engaged but presenting biology as a string-of-facts precludes an appreciation of the complex cellular and molecular phenomena which drive biological processes. This is true not just of teaching *evolution*. Biology is generally taught as a set of lectures or experiments. But traditional biological experiments require relatively costly infrastructure and training, which might not always be available in rural schools. The third option was gamification – a fantastic way of engaging young children while teaching scientific concepts. Games allow children to experience shared learning, exploring and deriving scientific principles for themselves. I, therefore, searched for biology-based games or activities – but found only games based on physics or chemistry. This set me on a path to gamifying biology. Having no prior experience in creating games, I first laid down the principles that the games should espouse.

Starting out

I found a few biology-based activities that helped me begin. One example is teaching parameters that control cell size. Cell size depends on many factors, but one key limitation is the time taken by nutrients to travel from the cell surface to target organelles. If the nutrient does not reach the target within time, the cell may die. One way for nutrients to travel is diffusion. A simple way to replicate this in a laboratory is by using agarose cubes of different sizes, infused with a pH indicator. These pieces when put in acid change colour in response to the pH change. The larger the piece, the longer it takes for the colour change to reach the core. One can simply have students make agarose of different sizes and once the pieces are ready, have a race to see whose piece completes the colour change first. This is a fantastic activity to reinforce two things: one, unlike shown in textbooks, cells are actually three-dimensional and second, the larger the cell, the more time nutrients take to travel within it. Since a number of molecular reactions within the cell are time-dependent, cell size has to be configured to optimise nutrient transfer. In schools where resources for creating agarose pieces might not be available, similar experiments can be performed using pieces of beetroot or bundles of chromatography paper.

I tried this activity with a few students and their reaction demonstrated the benefit of transforming principles into activities. They had fun while making these agarose pieces; they were awed by the changing colours and triumphant as they understood how this simple activity is related to one of the core phenomena in biology. In doing this experiment, I found the principles I would use for gamifying biology.

Principles for gamification

Games should teach core principles

> An important facet of gamification is the intended outcome. Do you want the students to learn a fact or a principle? While games can be based on either, my drive behind gamification was to communicate basic principles, which the students could then apply to biological phenomenon. Distilling down a biological concept to its basic principles helps refine the design and rules of the game.

The cell size activity, for example, does not directly involve studying cell size. Instead, it teaches the relation between size and diffusion and this core principle can then be applied in the context of cell size. This makes the activity less daunting and once the core principle is learnt, it can be applied across multiple phenomena.

Games are about shared learning and exploration

A core tenet of games is shared learning – participants work together as they try to solve a

puzzle, break a code or trace a path out of a maze. During this time, they are learning from their own mistakes or successes as well as from their peers. Games should allow for this learning and have time built in to reflect on this learning after the game is over.

In the cell size activity, some students will invariably make a huge piece of agarose and learn that a bigger size does not help them win the eventual race. This shared learning helps the entire class learn and remember the principles.

Games should be fun

While the primary objective of a game should be learning biology, an important outcome is the built-in opportunities to have fun. This could be in the form of a group or individual activity – such as racing, drawing or another game, like dumb charades. When participants have fun, they can connect back to the learning experience.

For the cell size activity, the fun is in thinking about what the shape and size of the agarose pieces should be. Students can do this individually or in groups and pour their creativity into making the pieces. Even if not all students remember the principle of diffusion, most of them will remember the fun in making a star shape or sphere out of agarose.

Games should be flexible

Not all schools will have similar physical infrastructure and even within the same school, the modalities of the game will differ depending on the strength and grade of the target class. Therefore, it is important to build flexibility into the game, allowing for its use to be tailored by the teacher, depending on the learning level of the class.

The cell size game can be played in most schools and is flexible to be re-imagined using the resources available there. The important point of the game is figuring out the core principle to be taught and a mechanism to gamify it. Once that mechanism is understood, a teacher could use the tools at their disposal to re-invent the game for their students.

Students should be central to the game

Games have to be optimised to ensure students can get the most fun and learning out of playing. This approach can challenge traditional concepts of game design, but it is important to prioritise students' experience over trying to fit the game into a traditional design.

The cell size game is all about students having fun and being creative. It is about giving them the space to create something with their own hands and learning from it. Once they have fun in the activity, they are more likely to remember both the game and the principle.

Approach to game creation

With these core principles in mind, I set about creating a game based on the principles underlying evolution. There are various ways to gamify – you can create an activity-based game (like the cell size one), a card game or a board game. Since evolution works across time, I thought a board game depicting the passage of time would be an ideal start. Thus, each block on the board would correspond to a unit of time, and with each move, the participant would move forward in time.

The next step was to identify the core principles that I wanted to teach through the game. I narrowed down on the following principles:

1. Pressures from the environment affect the characteristics of species; thus, species gain traits to adapt to the environment.
2. For evolution to happen, the changes have to occur at the species level.
3. Evolution is a continuous process.
4. Organisms/species that cannot adapt to their environment, eventually, die out.

The next step was to design the game. Traditionally, board games involve a small board, pawns and cues. My first thought was to create animal/tree-based pawns that individual students could play with. While this sounded like a good idea, it did not seem to be the best way to keep the student at the centre of the game. This board game would cater to only five-six players at a single time and it would be difficult to keep them engaged. I, therefore, decided to flip the idea of a traditional board game – making the students into pawns themselves and turning the classroom into a giant board. This meant we could now play with a class of 30-35 students and all students would stay engaged with the game.

The core process of the game would be to have students play various species going through time, giving them specific selection pressures and a chance to adapt and awarding points on traits gained and members of species surviving at the end.

This was the start of the idea – the board could be drawn on the ground of the classroom or play

area. Some teachers used chalk, some created flex boards, some had their common-room floors painted to incorporate the board. The students were to be divided into teams of five and asked to randomly pick three characteristics – flight, burrowing, swimming, etc. Some teachers created props for the students to engage them further. One representative from each group would stand on the board while the other members sat in a group next to the board, cheering on their representative. The board depicted the passage of time and was randomly strewn with challenges. Each challenge was a selection pressure – a flood, a volcano, a new disease. In some places, we used dice to dictate movement across the board, like traditional board games. One innovative teacher used this idea to create a dial, marking time. The students would spin the dial to figure out how many spaces across the board they could move.

The challenges were marked by numbers on the board. If the group landed on a challenge, the teacher used 'challenges cues' to assign a challenge. If the group had a trait that could help it deal with the challenge, the group was safe. For example, if the challenge was a flood, but the group could swim, they were safe. If they did not have a compatible trait, the group would be given a chance to adapt by playing an activity. The challenges were also designed to be fun and flexible. For example, if the challenge was a flood, the activity to gain a trait was jumping across a make-believe pond. Some teachers asked the students to use white and blue chalk to mark a pond on the floor, some used a piece of blue cloth. The size of the 'pond' depended on the age of the students. Those who fell in the pond were out of the game, those who passed were deemed to have adapted to the challenge and gained a trait.

The game was designed to allow teachers to figure out challenges and activities on their own, depending on the age of the students, size of class and resources available. The challenges could be based on a regular school curriculum or to capture a current event, such as a pandemic. The activities can range from pin the tail of a donkey to a three-legged race, depending on the class. This flexibility again centralises the students, focussing on them having fun while learning.

The game starts with four or five competing species. Points are given based on new traits earned and for surviving members of the species. The game usually lasts for 30-45 minutes. At the end of the game, the students are asked what they learnt from the game. The first time I did this exercise with the students of Shri Devi Sateri High School, I was impressed with their responses. One student said, 'When you face challenges, you can find a way to overcome them.' Another said, 'For the same challenge, there are multiple ways to overcome it.' This is true of evolution as well, and something I had not even included in the design of the game!

We then talked through the major principles we learnt. Every time a team overcame a challenge, they won a trait and could move to the next round. Adaptation through adjusting to environmental pressures is a key tenet of evolution. The board is littered with challenges – evolution is a continuous process and species are always responding to environmental pressures. Those who fail at a challenge, 'die' out – indicating that species that fail to adapt, become extinct. At the end of the game, the team with the most traits and surviving members wins – this conveys that a single member of a species getting adapted does not mean that the species is safe. Evolution occurs at a species or population level, not at the individual level. Once we go through these principles, the students are invited to think about their favourite plant or animal species and talk about the traits which they think have helped the species to adapt to their environment. This cements the principles to the broader concept and reinforces the learning by relating the concept to personal experiences or likes.

All elements of the game are printable; if a printer is not available, these can be drawn on paper or board. This makes the game freely available to all and customisable.

There are limitations to the game that also need to be discussed. No species can easily pick up traits – a fish cannot also have wings. While this reality is suspended in the simpler versions of the game, there is a way to include this in subsequent iterations as students learn. In subsequent versions, traits can be given points and a group can only have a fixed upper limit of points. Thus, if they want to take in a new trait to adapt, but that trait increases the total points they have over the fixed limit, they will have to trade in a trait that they already have. This also mimics evolutionary principles to a certain degree. The game can also be designed to include overlapping pathways, allowing species to cross paths and predate on each other. Once the principles and objectives of the game are clear, the teacher can add elements based on her discretion. The mathematics teachers at Shri Devi Sateri High

School used this game concept to create a similar game for teaching maths and the new GST rules which had just come in.

Another key point is that these games can also be made virtual – but that can distract from the shared learning and physical experience of playing. Hence, I make a conscious effort to make board or card games, and not virtual games. However, virtual games might be attractive to a target audience and the same principles could be used to create a virtual evolution game.

Conclusion

The evolution game has now been tried across multiple schools and grades – including the Agastya International Foundation, Bengaluru – and has been welcomed as an addition by the teachers. Creating games based on biology is simple: focus on the underlying principles, not on the biological facts that are to be taught. The principles can be adapted to become the rules of the game. Find the way in which the students have the most fun and are most engaged while playing the game. Keep an open mind in game design and do not be limited by traditional concepts of games. It is best to keep the game tiered so that the increasingly complex concepts can be taught over time. Ensure there is reflection time for the students to go through the principles they have learnt and can apply them to biological concepts on their own. Games are a great, fun way to teach biology, particularly in contexts where resources for high-end experimentation might not be available.

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Conversations on Consent Through Play

Shilpa Bajaj

Sexuality is an integral part of human life. The earliest impressions relating to sex are usually formed during early childhood, often before a child is able to speak. There are various stages crucial to sexual development, such as the stages when young children observe the presence of their parents and other adults around them, when they are being toilet trained, and when they discover and show interest in their genitals. The caregivers' attitude and approach toward these interests guide the psychosexual development of children. As children continue to develop and their curiosity grows, they ask various questions related to sex, procreation and birth. During this phase of rapid growth and development, children experience and learn about their bodies. They observe gender roles and construct self-identity.

Some of us may believe that discussing sex-related matters will deprive children of their 'innocence'. Sexual awareness is important for all of us, including children. It will not corrupt their innocent minds but will guard them against physical and emotional threats. It is the manner in which children's questions are answered that contributes to the kind of attitudes they will develop towards sexuality. So, it is important that their curiosities are addressed constructively, in an age-appropriate manner.

Concepts of consent and agency

Comprehensive sex education involves providing scientifically accurate, non-judgmental, age-appropriate and complete information on sexual matters from the beginning of formal schooling. Children learn about the cognitive, socio-emotional, interactive and physical aspects of sexuality which empowers them with information, skills and positive values to have safe and fulfilling relationships. When children learn about equality and respect in relationships, they are able to recognise abusive persons and situations, which makes it easier for them to take care of their own and other people's well-being.

In building safe and respectful relationships, the value of consent cannot be overestimated. Consent is a concept that we respect each other's boundaries, taking care of the safety and dignity of ourselves and others, thus building physically and emotionally healthy relationships. Teaching young children about consent not only protects them from predators but also lays the foundation for emotionally and physically safe relationships in later stages of their lives. It also ensures a secure learning environment in the classroom by fostering healthy interpersonal relationships among children. They learn the basic concept of body, space, touch and boundaries. They understand their own and others' emotions better, which empowers them with skills to practice their agency over age-appropriate issues.

Teachers understand the importance of such learning experiences in children's lives and often think of ways in which to create a conducive environment for children to learn and practice these values. Play and activity-based learning in a democratic environment can be the best way to introduce these ideas to young children. There is a set of activities given below which helps children learn the concept of safety and agency in a fun way. Teachers can design many other activities like these with different learning objectives relevant to the sex education for young children.

Activity: Bubble of safety

Day 1: Story

Ask students to 'free walk' in a large circle. After three minutes, ask them to return to settle down. Now, while discussing the experience of this activity with them, discuss the difficulties encountered during this activity. Ask them what their thoughts were during the free walk; if they were afraid of going too close and bumping into their classmates; if yes, why?

Direct the discussion by showing a picture (like the one on the next page) and asking students about their observations/experiences related to bubbles.

After this, introduce the story of the safety bubble.

Story: Safety Bubble

All of you must have seen bubbles. My name is *Safety Bubble* and I will tell you about myself. I am not an ordinary bubble; I am a special bubble. Everyone in the world carries me around themselves – you, your parents, friends, grandparents, even babies (like in the picture below). But my special quality is that I am not visible and I just do my work without being seen.

Now you must be wondering if a bubble does any work, and that too, a safety bubble. So let me tell you that my work is also hidden in my name. Can you imagine what could be the task of a safety bubble? (Give the children a chance to guess and answer.)

My job is to take care of every person in such a way that no one goes near his or her body or touches it without permission. All my safety bubble friends, like me, are always trying to keep ourselves away from each other and not bump into each other. But many times, people forget about us completely and go so close to each other without permission that we burst. People forget to look around and run into their friends while playing, they pull their friends' clothes to call them, they hit them or touch their belongings without permission. When this happens, people do not feel comfortable in their safety bubbles and their friendships also weaken. That is why I have come to your class/group today to ask all of you for help. Can you think of some ways in which you can take care of your and other people's safety bubbles? (Give the children a chance to guess and answer.)

Discussion: After telling the story, discuss the following questions with the children:

- What is the function of the safety bubble?
- What are the reasons that can lead to the damage/bursting of your own and other people's safety bubble?
- Why is it important to take care of your and others' safety bubbles?
- How would you feel if someone does not take care of your safety bubble?
- How can you take care of your own safety bubble and those of people around you?

Once again, ask the children to 'free walk' for two minutes in a circle in the classroom/playground. This time, encourage them to take care of their and others' safety bubbles. Now ask students the difference between their experience of free walking before and after the story and why according to them did they feel this difference.

Help the children come to the conclusion through free walk and story that we should take care of the invisible bubbles around us and always try to protect these. We should not enter other people's safety bubbles without permission. With the help of these activities, draw the children's attention to how no one likes to be touched without their permission and therefore, we should always imagine that there is an invisible bubble around everyone that we should not burst.

Day 2: Game

The following day, discuss the story of the Safety Bubble with the children. Then, in an open space, play the game *Simon Says* with them. Explain the rules of the game, that is, they must do what 'Simon' instructs them to do, but at the same time, they must also take care of their own and everyone else's safety bubble.

Play this game for 10 minutes and then, bring the children back to class. Discuss their experience of

playing the game and what would happen if they did not have a safety bubble (distance between themselves) while playing. Follow this up with a role-play. Aditi and Vivek are two friends who decide to play Simon Says. Two teachers assume the roles of Aditi and Vivek and the children watch.

Aditi: Simon says, clap.

(Vivek claps)

Aditi: Simon says, hands up.

(Vivek puts his hands up)

Aditi: Now, your turn.

Vivek: Simon says, sit down.

(Aditi sits down.)

Vivek: Simon says, hold your friend's nose.

(Then he laughs and touches Aditi's nose. Aditi backs off and walks away)

Vivek: What happened, Aditi?

Aditi: I won't play.

Vivek: But what happened?

Aditi: Keep your hands to yourself! *(Apne haath apne tak)*. Even while playing.

Vivek: Your hands to yourselves? What is that?

Aditi: Yesterday, during the lunch break, Rinky and I were playing 'rabbits and monkeys'. We were having a lot of fun but when Rinky said, 'Monkeys like to tickle' and she tickled me, I didn't like it. I didn't want her to tickle me. And later, in class, she touched my hairband without asking me; I did not like that either. Then, while playing in the sand outside, she took the lid of my bottle from my hand and did not even ask me. She does not keep her hands to herself and repeatedly comes into my safety bubble without asking.

Vivek: Oh! Then what did you do?

Aditi: I talked to Rinky and told her that she does not keep her hands to herself and gets into my safety bubble without asking. It breaks my bubble and I do not like it at all. I also told her that it is not a good thing that we touch someone or take their stuff without asking them. It may upset them. That's why 'keep your hands to yourself'. Remember that before touching someone, we must take their consent and if they say no, we should not do it.

Vivek: It is a good thing that you talked to Rinky. Did Rinky understand this?

Aditi: Yes, she told me that she did not want to upset me, she was just playing. She promised me that she will always ask before touching and taking others' stuff. She made a 'pinky-promise' by locking her little finger with mine but even before that she first asked for my permission, and I happily said 'yes'.

Vivek: Now I understand what is meant by 'your hands to yourself'. Thank you, Aditi. Do you want to play 'Simon says' with me again?

Aditi: Yes, of course. But your hands to yourself *(apne haath apne tak)*

Vivek: Unless your friend says so *(dost na kahe tab tak)*

Aditi: Careful! The bubble should not burst *(dekho bulbula na toote)*!

Vivek: No friend should get upset *(dost koi na roothe)*.

(Aditi and Vivek start playing their favourite game again.)

Discuss the conversation between Aditi and Vivek with the children. Ask them the following questions:

- Why did Aditi refuse to play with Vivek in the middle of the game?
- What had upset Aditi?
- If your friend comes into your safety bubble without asking you, what will happen and how will you feel?
- If this happens, what and how will you convey the message of 'consent' to your friend?
- Just as Aditi told Vivek the rule of 'your hands to yourself', in the same way, would you like to make this rule for your class?

By discussing the conversation of Aditi and Vivek, help the children to come to the conclusion that we should all take care of the safety bubble around us and ensure that no one gets into it without first asking us. If a classmate or a friend is stepping into another's bubble, then we can gently tell them about this rule because by following it our friendship will also remain strong.

Acknowledgement

The author would like to acknowledge the help of Early Childhood Education experts, Latika and Vanshika Dua, in designing the activities mentioned in this article. Latika is a Curriculum Developer and Teacher at Ahvaan Trust, New Delhi and Vanshika Dua is a Curriculum Developer and Teacher Mentor in the same organisation.

Image Sources

https://images.agoramedia.com/wte3.0/gcms/Toddler-play-with-bubbles-722x406.jpg?width=574

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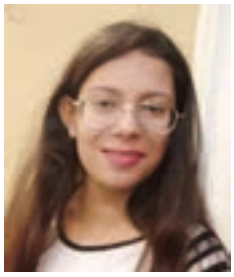

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A core tenet of games is shared learning – participants work together as they try to solve a puzzle, break a code or track a path out of a maze. During this time, they are learning from their own mistakes or successes as well as from their peers. Games should allow for this learning and have time built in to reflect on this learning after the game is over.

Shambhavi Naik, Games for the Science Classroom, p 77.

Games and Explorations in Mathematics

Swati Sircar

Who taught us how to use a smartphone? Didn't we learn by playing with it? Some of us are still learning!

Many have argued the importance of play when it comes to children's learning. We are all familiar with quotes like 'play is the work of childhood'. When it comes to children, in particular, we are beginning to blur the dichotomy of 'work' and 'play'. But why is play so important? How does it help children (and adults) learn? What role does it have in the teaching and learning of maths in particular? Let us start with what we mean by 'play' in this article.

Structured play or games

One way to look at 'play' would be to think of it as 'games' with a clear win or loss (or draw); it can be played with one or more players, in teams, or just by oneself (like *Solitaire*). These necessarily involve rules, can be dictated by chance or probability (especially if a game involves dice and/or cards) and/or is strategy-driven (like chess) or a combination of luck and strategy (like bridge). *Jodo Gyan* and other resource groups use several modified dice for fractions, shapes etc. There are some card games, as well.

Since the end goal of this kind of play is clearly a win, proficiency is desirable and high in demand. So, games naturally provide the player with a purpose to sharpen his/her skills. This can be harnessed by any subject, especially maths, where computational proficiency is important. The usual prescription for mastering computations is drill and practice, which is undoubtedly boring and does cause children to lose interest in the subject. However, if the same is converted into a game – to be played as a team, then the same goals can be achieved with much more motivated participation from the learners. Moreover, peer learning can be catalysed since teams will put in all the effort to improve their performances. But the teacher or facilitator needs to set things up so that each child gets better at it.

The simplest way is to create two (or more teams) and quiz them periodically. The actual quiz can be timed, as in, questions have to be answered immediately or within a few minutes. It can be designed so that the first team to get it hits a buzzer. This should include some penalty for the wrong answer since children should not rush and compromise accuracy for speed. Or it can be designed in such a way that each team reveals their answer at the end of the allotted time. The need for penalty is less in this case, and therefore, the win is more because of one's own calibre rather than the mistake(s) of the other team(s). Therefore, this encourages proficiency but does not make the game too competitive. Also, the topic of such a quiz can be declared in advance and the teams given enough time to practice on their own, which should be supervised by the teacher (acting as the coach).

Team selection is critical. It is recommended that each team consist of a mix of children – those who are proficient and those who are yet to get there. It is also critical to ensure participation by each member of the team so that the team invests in improving the performance of each member and not rely only on its star players.

As children are learning addition-subtraction (and later multiplication-division) it is very helpful if they automatise certain number facts, for example, which numbers add to ten, 1 + 9, 2 + 8, 3 + 7, 4 + 6 and the sum of any two single-digit numbers, for example, 7 + 8, 6 + 5 etc. (and later 8 × 6, 7 × 9 etc.). Rapid-fire rounds can motivate children to automatise these number facts. However, to ensure that this is not just rote memorisation, and to check that the children know how to arrive at these results, the quiz can include bonus points where the child (or the team) giving the right answer is asked to rationalise their answer. For sums involving computation with numbers < 100, the bonus can be enriched further: In how many ways can you solve 56 + 37? where each method fetches a point. This fosters number sense as they will be playing with the numbers beyond (and ideally before getting into) standard algorithms. It helps them come up with their own shortcuts for mental maths.

Note that this playing with numbers is quite different from its 'game' avatar. We will return to this after discussing a few more aspects of games.

The rule-based world of a game directs the players to operate and think within certain set limits. So, one has to be creative within the given bounds. This facilitates navigating the world of maths, which is rule-based but allows many adventures within the same. It is especially a good idea to let children explore what is possible and what is not within the rules of a game, (for example, in chess, which squares can the black knight occupy) and within maths (for example, is it possible to find two odd numbers that add up to another odd number? Or if a quad is a kite and a trapezium, what are its properties?). Strategy-based games demand higher-order thinking skills, a deeper level of understanding and possibly some creativity. The Random Digits Game (check references) is one such.

Games can also be utilised for assessments. Instead of asking for definitions, the teacher can ask for examples and ideally, non-examples. But the 'game' aspect can be utilised even further. Once children get the hang of a certain type of tasks, they can be asked to create similar problems/tasks specifically to challenge the other team(s). This way, children would be motivated to create complex questions allowing their creativity a chance to flourish.

Free exploration play

Now let us come to the other avatar. Play also means free exploration which is not bound by any rules, or the rules can be developed if and when needed. Young children learn a lot through role-play, alone or with others (children and/or adults) where they imitate (mostly) adults and learn by experiencing the lives of people around them (or of the characters they know). Another aspect of this 'exploration' kind of play also involves familiarising oneself with a certain situation or material and developing an understanding of the possibilities as well as the boundaries. When a child explores origami, for example, she or he learns how paper behaves, what can be done, what is difficult to do (and what is impossible). Unlike games, the end goal is usually not clearly defined in exploration, at least not at the beginning, and can evolve as the explorers' understanding of the situation or the material grows. Both kinds of play, games and explorations, are important when it comes to learning maths and both should be utilised.

Starting right

Before we move ahead, let us take a closer look at this school subject which is not only a discipline but also a form of understanding. The image of maths in the minds of most people – parents, teachers and therefore, children – is that it is a rule-driven, dry subject strictly hierarchical with very little or zero room for creativity; you either get it or you do not. On the contrary, maths can and should be discovered by children – starting from class I (or earlier). Once the basics are taught, that is, the meaning for various number names by relating them to their respective quantities, the numerical representations of numbers, place-value or more importantly, the idea of bundling in tens and how that is crystalised as numerals, children should be able to figure out more-less, and come up with the rules to find the smaller/smallest (or bigger/biggest) number given a bunch of numerals (for example, order these numbers from smallest to largest: 38, 83, 40, 9).

It is crucial that children have access to some manipulatives (bundle-sticks and/or *Ganitmala*) to make these numbers and then decide which indicates the smallest quantity (no bundle) and which indicates the largest (highest number of bundles). These explorations or playing with numbers can be done in groups and teachers can push the children to articulate their findings and consolidate that understanding into a rule. This exercise will help develop mathematical communication and help students appreciate the precise as well as concise nature of the mathematical language. *Meaning of Fractions* (video link in references) illustrates how a teacher can get children to articulate by asking questions and not giving away the answer.

Explorations and investigations

Similarly, once the meaning of addition, subtraction (and later multiplication and division) has been explained and understood, different ways of adding and subtracting numbers should emerge out of children's play with quantities. Different kinds of manipulatives will help them discover different ways of computing. The algorithms can and should emerge out of such 'play'. The teacher's role is very important in helping children jot down their explorations in writing. When children get the sense that they discovered the standard algorithm themselves, it becomes highly empowering, and maths becomes something that can be learnt on one's own. In fact, this is exactly why those who love this subject, get drawn to it. More importantly, when children get the taste of this self-dependence, they no longer want to be told how to proceed, rather they want to embark on such adventures themselves. Consider the difference in teaching such children (vs the usual group) – it will be easy since the learners are eager and ready, but it will also be challenging because their hunger is of a

different kind. The teacher must go beyond the usual and look for problems, explorations, investigations that suit such adventurous learners – not too easy (and therefore, boring) but challenging enough to attract and engage them. Fortunately, the internet is full of such explorations and investigations, and most (if not all) teachers can access these, thanks to smartphones. (Check references for some such resources, especially the *Thinking Skills* pull-out.)

Similarly, multiplication tables should be constructed and then various patterns in them can be explored. Many children discover the digit sum property of multiples of 9 on their own. More such discoveries are possible and can make the maths class quite vibrant and exciting. Exploring multiples of numbers on the 10x10 grid of numbers 1-100 can lead to discovering the divisibility rules.

Discovering patterns

These games and explorations need not remain within numbers and operations. Playing with base-10 blocks (Flats [hundreds], Longs [tens], Units or FLU) helps transition to the algebra tiles just as *Ganitmala* builds the mental image of a number line. The explorations can lead to a lot of insights that should be harnessed by asking children to first make conjectures and then justify them. The habit of exploration enables children to look for patterns. This can be enhanced further by encouraging them to observe maths in their surroundings and everyday lives.

To motivate them further, the 'game' avatar can be evoked – 'find squares in your neighbourhood' (rectangles and circles would be too easy) with the bonus 'why is this a square and not a rectangle'. Another investigation can be to find mathematics in various vocations/crafts – how does a carpenter or a tailor use mathematics? As the sense of geometry (shapes, as well as, symmetry and spatial understanding) and algebra grows, formulas for perimeters and areas of polygons (and circles etc.) can be derived by making the shapes with matchsticks and card cut-outs of the same. Similarly, explorations with nets of solids (cuboids, cylinders, cones, spheres etc.) lead to the understanding of surface areas in particular and help with volumes as well. Exploring tessellation with different kinds of tiles (all possible types of triangles and quads) can lead to many theorems.

Explorations can lead to many interesting observations, discoveries, and interlinkages within maths (for example, which numbers cannot be written as a sum of consecutive natural numbers? Why is the hypotenuse of the biggest triangle in a 7-piece tangram slightly smaller than thrice the side of the square?).

The National Curricular Framework (NCF) 2005 and the Position Paper, Teaching of Mathematics, emphasise the mathematisation of children's thinking. Play – like games and especially as exploration – can achieve that by integrating several of the processes with the content. No wonder textbooks are now including games. And how much can children resist playing?

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- Meaning of Fractions: https://www.youtube.com/watch?v=swpDWTm73_I
- NCTM: Activities with Rigor and Coherence: https://www.nctm.org/ARCs/
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- Thinking Skills: http://teachersofindia.org/en/ebook/thinking-skills-pullout
- Sum of Consecutive Natural Numbers: http://azimpremjiuniversity.edu.in/SitePages/resources-ara-august-2017-lfhc-sums-of-consecutive-natural numbers.aspx
- Tangrams: http://teachersofindia.org/en/ebook/getting-shape-tangram-time
- Other pull-outs, activities and related articles: https://azimpremjiuniversity.edu.in/SitePages/resources-at-right-angles.aspx
- NCERT textbooks: https://ncert.nic.in/textbook.php
- Sikkim textbooks: Class 1: https://online.fliphtml5.com/iuwdn/pfdo/#p=1 Class 2: https://online.fliphtml5.com/iuwdn/kgob/#p=1
  Class 3: https://online.fliphtml5.com/iuwdn/hsdm/#p=2 Class 4: https://online.fliphtml5.com/iuwdn/ifaw/#p=1
  Class 5: https://online.fliphtml5.com/iuwdn/pjgl/#p=1

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Emotional Development Through Play

Valentina Trivedi

The older we grow, the more we 'do' and the less we 'play.' While work is glorified and put on a pedestal, play is believed to be too trivial, too childish, too silly, unimportant and discardable. Children are routinely told to 'stop playing' and finish their homework, their meal, or whatever it is that the adults around want them to do at that time. And yet a person no less than Albert Einstein said, 'Play is the highest form of research. All creativity stems from pure play.'

Ample research has proved beyond doubt that unstructured playtime in early childhood is vital for the social, emotional, cognitive, and physical well-being and development of children. Play is a natural tool for them to develop self-esteem, resilience, empathy, social skills and problem-solving skills, among others, as they learn to cooperate, overcome challenges, and negotiate with others. In short, play builds skills that are the foundation for an emotionally stable, empathetic, self-confident adult and we owe it to our children to ensure they do not miss out on it. Our responsibility to devote time to play at school becomes even greater if we accept the fact that it may not be a part of the child's home life for a variety of reasons.

Why isn't there more time devoted to play in a child's daily schedule? In my experience of holding 'play-shops' with teachers, I find that the biggest obstacle is the fact that teachers themselves have forgotten how to play. Parents and educators are so serious about 'teaching' that they forget that a healthy dose of play is vital for children to learn. And play here does not refer to outdoor sports, which are important for a whole set of different reasons.

Playtime around stories

No matter what his/her qualification, every teacher *must* be a reader of stories, and be as comfortable engaging with stories as speaking in his/her first language. The reason stories have ceased to be a tool to facilitate learning (different from teaching) is that adults feel engaging with stories is childish and something one must grow out of.

The benefits of engaging with stories at any age are manifold and would require a separate article; suffice it is to say that it is criminal to relegate it to a place of short-term entertainment. Beyond reading and telling stories, here are a few more ways in which teachers can engage children in playing with and creating stories because creation, no matter at what scale, provides a slice of fulfilment to our fantastic human mind while being a celebration of our spirit. It makes us pause, observe, wonder, play, believe, empathise, emote and share.

Take turns to build

One child begins a story and then all children, by turns, keep adding to it, building upon what has been said by the previous child. Depending on the number of children, you could start with one round and move to two rounds for the next story. Each child adds only one sentence. This is a very simple creative exercise in which children can experience building something together as each child builds on what has been said earlier and not in isolation of his/her own thoughts and ideas. At times, it also encourages a child to say as much as he/she wants to in one grammatically correct sentence.

Pick and choose

Make three lists: characters (elephant, queen, mouse etc.), setting (jungle, river, city, school, mountain etc.) and objects (magic wand, a cup which speaks in a human language, a watch which allows you to travel in time, a cloak which makes you invisible, etc.). Each child has to choose one thing from each of the three lists and create a story. As a second part, you can pair up the children and ask them to create a new story with three or four of the six things on their combined lists. This is an activity that allows children to expand their imagination which is directly linked to improving problem-solving skills.

Points of view

Tell a story with multiple characters (some of the Panchtantra stories work very well in this activity). After the story, divide the children into groups asking each group to come up with the story from

the point of view of a particular character. This technique nudges children to see things not just as black and white but to try and understand the motivations of characters who act in ways that are not considered acceptable. It opens young minds to the idea of accepting points of view other than their own.

What if?

This involves juggling characters and settings in creating alternate scenes of known stories. What if the kind person had a change of heart, the mouse got magical superpowers, the monkey could read people's thoughts, the king actually wanted to become a singer, or the crow wanted to walk instead of fly? The possibilities are endless and can spur young minds to take wing and work at coming up with alternate solutions, endings and ways of being.

Introducing a modern object/place/person

This is a variation of the previous. So, the horse has a cellphone, the thief has a scooter, the postman meets Shahrukh Khan, the boy owns a playground, the elephant has a microwave oven, etc. Again, there are endless possibilities. When children create or co-create stories, I always point out to them that they have created something brand new - which did not exist in the world till then!

These are just a few ways of playing with stories. Once you start, you will be surprised at how more ideas of doing this keep appearing like stars in the evening sky.

What else can it be?

You will need a collection of objects of varied shapes and sizes. Hold up one object at a time and ask children to first say what it is. Everybody will give the same and obvious answer. Now tickle their creativity and ask them what else it can be. Give them some time and pauses, as their creative juices start to flow. Sometimes, when they run out of answers, you may need to help them open the parachutes of their minds further by asking questions like, 'What can it be to an ant?' 'What can it be to a giant?' You can start with things such as a bowl, a coaster, a spoon, a bottle etc, and then move on to the more irregularly shaped objects.

This is a simple exercise that encourages children to look beyond the obvious, in a playful way. The implications are far-reaching. From opening their minds to possibilities beyond the obvious about objects to doing the same about people. They learn to not judge people by how they may appear but keep their minds open to the possibilities within a person. It broadens their outlook and gives them a holistic worldview. Playing this game is a good reminder for teachers too to keep their minds open to the immense possibilities within each child.

Magic in the mundane

This is truly a magical way of being, which has the power of playfully transforming every ordinary thing in our surroundings. Anthropomorphism, which comes naturally to a child, is, simply put, the attribution of human characteristics, emotions, and behaviours to animals or other non-human things (including objects, plants, and supernatural beings). Children take to it like a duck to water and teachers are surprised to experience this new way of looking at things.

Apart from all the earlier mentioned benefits of play, this kind of playful thinking helps build a foundation for two vital attributes: empathy and connectedness, which go a long way in moulding happy, compassionate mindsets.

One of the easiest ways to get started is to bring an object to class - it could be a pebble, a flower, a leaf, a ball, a cup, a spoon, a key or a comb. Pass it around or in an online class just show it to the children. Now ask the children to think of where it is usually found or kept and list each of the following:

1. What must it be seeing?
2. What must it be hearing?
3. How do you think it feels?

It is important that the questions are asked one at a time so that the children focus on creating one list at a time. Also, they should write only single words; not sentences and paragraphs because this is not a language or writing exercise but one of flexing their creative muscles. This playful exercise can be an ongoing one with a new object each time.

4. The next step would be to try and imagine a dialogue between two objects. This can even continue in two-minute capsules: What did the piece of chalk say to the table? What did the teacup say to the spoon? What did your school bag say to the chair?

Playtime: Things to remember

Play, instead of being teaching focused, is learning focused. It invites grown-ups to drop their roles and connect with the children before them as well as with the child within

them. The benefits of play are not accrued by children alone. In giving adults the opportunity to engage with children and see the world from their perspective, play is a priceless stress-relieving, anti-depressant, anti-ageing potion. Erik H. Erikson said, 'The playing adult steps sideward into another reality; the playing child advances forward to new stages of mastery.'

These simple tried and tested playtime activities developed experientially, can be used in a classroom, at home, during a journey, in a doctor's waiting room or just about anywhere. They give children a chance to think independently, come up with original ideas, create, co-create and express themselves; in the process giving them a chance to hone the 4Cs of Critical thinking, Communication, Collaboration and Creation in an enjoyable way. Simple tools to facilitate learning, these require no additional expense on equipment and can be enjoyed by a person of any age. All that is needed is a small slice of time and a commitment to make it work.

A few basic points for teachers and parents to remember while indulging in play:

1. Remove and lock up your 'teacher' hat and don the 'playmate' hat instead. Remember this is pure playtime, untainted by 'teach' time.
2. Put away your personal mantle of age, qualification, likes, dislikes, strengths, weaknesses, and other responsibilities. When I interact with children, I am completely in the moment, listening and responding. I put away my cellphone and never let it disturb the sanctity of playtime. It brings rich rewards of joyful creative experiences.
3. You will get a glimpse into how children view their world, how they approach situations etc. Resist the temptation of being judgemental. You are not there to judge the merits or demerits of a response while playing a game. Remember, for the duration of play, there is no teacher. You are all playmates. Children may say they did not know, they will hide, lie, pretend and all this is acceptable because the stakes are low – these are only imagined situations. By offering a space to them to express themselves freely, you are providing them with a healthy learning environment.

   During one such game a child was asked, 'What would you do if you accidentally tore your best party frock?' She promptly replied, 'I would blame my sister.' In such a scenario, resist the impulse to give a sermon on the value of truth. I promise you that your accepting an answer like this will not encourage the child to become a liar. It will just build a bond of trust between the child and you.
4. Do not carry personal responses from the games to use as arguments when you wear your teaching hat again. Think of it as a book – you open the book when you start playing and once playtime is over, you close it. Playtime is a sacred, magical bonding space. Of course, during the course of the day, some or the other child might pipe up with an idea for playtime, because their creativity has been stirred by the games and it continues to bubble. At such a time, you would have to resist the urge to say, 'stop daydreaming and pay attention,' and gently tell them to save it for the next round of play.

These are a few playful activities, deceptively simple in execution but remarkable in the learning they bring about. Once begun, they offer endless possibilities as there is no knowing what amazing thoughts and ideas the children can come up with. Let us acknowledge the fact that play is not a luxury but an absolute necessity and a vital pillar of skill-based learning. A child's world should not be restricted to the home and the classroom but should also include a vibrant world of make-believe and we must constantly strive to enrich this inner world.

Valentina Trivedi is a writer, performer and educator. She is the first woman member of the Board of Governors of The Doon School, Dehradun. Her creative work encompasses various mediums: performing, writing scripts, directing short films, editing, translating, adapting and telling stories, most recently on her numerous podcasts. Passionate about children and learning, she specialises in approaching the learning process from a child's perspective and has been invited to numerous educational forums to share her views. As a *Dastango*, singing is a unique aspect of her performances. She has worked in both, formal and informal sectors, proactively initiating and encouraging community endeavours. She can be reached at storyweaverval@gmail.com

A Day in an Anganwadi Centre

Yogesh G R

Play is essential for a child's well-being, growth, and healthy development. A child's 'Right to play' is emphasised in Article 31 of the United Nations Convention on the Rights of the Child (UNCRC 1989), the world's most widely ratified human rights treaty in history.[i] Play occupies a vital place in the curriculum, pedagogy, and assessment processes of the early years and contributes to children's learning and development.

The change in family structure from joint families to nuclear families combined with the change in lifestyle where both parents go out to work, in addition to the increased focus on academics has reduced the amount of time a child could spend playing. Urban children are more vulnerable in this aspect than rural children. So, despite its numerous benefits, time for play has been markedly reduced for most children.

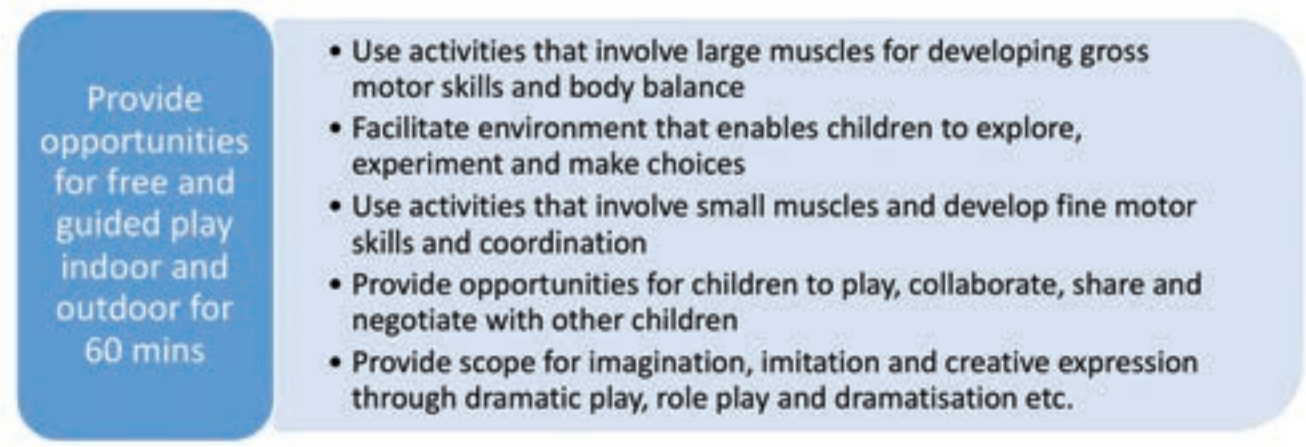
Importance of play as pedagogy in early years

Young children have an inherent desire and capacity to play due to which there is no external motivation required for making them play. Play is the means through which they make sense of the world around them. Play contributes to their cognitive, physical, social, and emotional well-being and is essential to their development. The National Education Policy (NEP) 2020 emphasis this by stating that Early Childhood Care and Education (ECCE) must ideally be play- and activity-based and facilitate both indoor and outdoor play.

Play needs to be child-centred, and children must enjoy playing. It should make them explore their environment through thought and inquiry to find ways to satisfy their curiosity.

Depending on the teacher's scaffolding, play can be broadly categorised into free play and guided play. In free play, the child decides and controls what and how he or she plays; the teacher is a passive observer. Whereas, in guided play, the teacher also becomes a player and plays with the child collaboratively within the learning environments provided. Apart from this, play can also be categorised into indoor play and outdoor play according to where the children play. The teacher needs to strike a balance and plan the right mix of these play categories to provide new learning opportunities and consolidate existing learnings. For systematic learning to happen through play, the teacher needs to plan and prepare play activities well in advance and during guided playtime, give appropriate instructions to children and facilitate the play.

Play is one of the six teaching practices that we focus on in the capacity-building of *anganwadi* teachers in Sangareddy. This teaching practice emphasises that teachers provide opportunities for free and guided play indoor and outdoor for at least 60 minutes daily.



Is play a waste of time?

Adhemma is a teacher in an *anganwadi* centre about 120 km from Hyderabad. Shailaja is a child in her care. Shailaja's mother came to Adhemma one evening to express her concern about seeing Shailaja playing at the *anganwadi* most of the time and was worried that Shailaja was not learning much which might be a disadvantage when she joins grade I. Adhemma told her to come to the centre the next day at 10:30 am.

Shailaja's mother came in when the children were having their daily eggs that are provided at the centre. Adhemma told Shailaja's mother that she started the day at 9 am when she welcomed the children with greetings. This was followed by a circle-time which started with a conversation, followed by rhymes with actions and story-time, each lasting 20 minutes. After this, the children were given eggs to eat. When they finished eating, they washed their hands. Then, the teacher announced that they could go outside to play.

Each child picked one or two play items of their choice from the outdoor play box that was kept next to the teacher's table and ran outside. The teacher pointed to the children and told Shailaja's mother, 'Look how happy the children are when they go out to play. Happy children learn more and better than sad children.' The teacher also went out and sat on the front veranda from where she could watch the children play. The teacher said, 'There are two types of play that the children play outdoors. Free play is when children play among themselves without any rules. In this functional play, the children use bodily movements, sometimes without objects, such as running, jumping, and sliding, and sometimes with objects, such as ball, bat or hula hoop. All these lead to the development and strengthening of muscles of their body.'

After 20 minutes, the teacher said to Shailaja's mother, 'It is now time for guided play. Guided outdoor play is when the children listen to the instructions that I give and play following rules of the games.' She called the children and divided them into two groups. She drew a big circle on the ground and asked one group to stand inside it. They were going to be the monkeys, she told them. She made the second group spread out and stand outside the circle and gave them a ball. She showed them how they had to throw the ball only to others in their group (outside the circle) in such a way that the monkeys in the centre would not be able to catch the ball. Each time the monkeys caught the ball, she gave one point to the monkey group. After 10 minutes, she interchanged the teams. In the end, she asked each team to clap for the other team.

The teacher then asked the children to wash their hands and go inside. One child took charge of pouring water and the other children took turns to soap and scrub their hands thoroughly. The teacher too washed her hands and told Shailaja's mother how throwing and catching ball improves children's eye-hand coordination. 'This is a very important skill

for children to learn as this is what will help them the next year when they start writing alphabets and numbers,' she explained to the mother.

Back inside the centre, the teacher gave each child a blank sheet of paper and two crayons each and asked them to draw the plants which they had seen during their nature walk the day before. Soon it was time for the mid-day meal, after which the children took a nap.

At 2 pm, the teacher woke the children up and asked them to play in the 'learning corners'. A few children picked up the building blocks and started building a train, a bus and buildings with them. The teacher pointed to them and told Shailaja's mother, 'Fingers in the children's hand gets strengthened when they play with building blocks. They also use their creative skills to build different structures and learn by way of trial and error. This also increases children's perseverance and focus.'

The teacher pointed to some children who were in the 'book corner' skimming through the books and pretending to read them. Some children were in the 'doll corner' where one child was cooking in a kitchen set and role-playing as a mother. Another two children were playing with a doctor set, with one child pretending to be a doctor and another a patient. The teacher said, 'During free play, children imitate what they observe in the adult world, imagining and constructing new realities and testing them out with other children. These interactions with peers develop their social skills.'

Shailaja's mother was astonished to know that through simple play her child was learning so many things. She let go of her belief that play is a waste of time. She thanked the teacher for patiently explaining the processes in the *anganwadi* centre and promised to support the teacher in every way possible. The teacher informed her, 'This Saturday, during the ECCE Day (monthly parents-teacher meeting) you can explain what you have experienced today to other parents so that they will also understand how they can support their children better.'

Creating an enabling environment

Physical environment

An *anganwadi* centre should be clean, hygienic, and safe for the children to be able to play. Where there is only one room for use, clear segregation of the cooking area (for mid-day meals) must be made. The teacher must organise learning corners with sufficient materials for the children to play with. The play and printed materials must be dynamic and based on what the teacher is planning to engage children with on a particular day.

Psychological environment

The teacher must create a fear-free environment for the children by being caring and respectful. Children must be comfortable enough to fully express themselves without hesitation. All children should get opportunities depending on their stage of development. They must be appreciated for their contribution during play, irrespective of their performance.

Role of play in assessment and intervention

Paper and pencil tests are useful for assessing children in primary grades but not for those in an *anganwadi* centre. Play is one of the ways to understand the levels of development in children in an *anganwadi* centre where the teacher facilitates individual and group play activities, observes the children, and notes her observations down as anecdotes, observation records, and running notes. These observations which are noted over a period of time are used to rate the level of development across the various domains. These can be used to plan further interventions regarding the opportunities that each child needs to be given. This is a continuous process that the teacher needs to follow throughout the year.

Benefits of play

Play helps not just physical but also the linguistic, social, cognitive, emotional, and creative development of children. Play is critical for the healthy development of the brain as it strengthens the synaptic connections through the repetition of frequently used skills.

Children communicate with each other during play. They talk, listen and observe the interactions among other children during role play and dramatic play. They listen to the instruction of the teacher. All these are opportunities for them to learn and develop their verbal-linguistic abilities.

Play involves physical movement which helps

children develop strength, flexibility, dexterity, coordination and greater control of their muscles. Through play, they explore and understand their body's abilities and limits. Play requires thinking, analysing, reasoning, predicting, and problem-solving to achieve set goals. Children also discover their emotions, social relationships and practices of sharing, negotiating, cooperating, and caring when they play with other children. Children use their imagination to apply and expand their current understanding and their creativity to create new things with what is present around them.

Solitary play helps a child explore surroundings at his or her own pace. Children play with toys and find multiple ways of doing so. They create their world through imagination. Dramatic play helps children in testing out abstract concepts, like money; and helps them overcome their fears by practising adult roles leading to the development of new skills. All these result in increased confidence, resiliency, and self-esteem in participating in social settings.

Group play helps children to practise communication, sharing, taking turns, self-control, decision-making, and leadership skills. When a child starts playing with new children it reduces his or her anxiety and fear. This, over time, will give the child the confidence to face new people in life.

Upward integration of play

In pre-primary classes, play is assumed to be an integral part of the academic environment. Beyond pre-primary classes, play is confined to the 'Play Time' period and seen separately. The NEP 2020 packages early grades (I and II) with pre-primary as 'Foundational years' which would aid in play spilling over from pre-primary to early grades too. For play to be used as learning in the primary and upper primary grades, a change in the mindset of teachers in accepting play as pedagogy will be required. This can be achieved with focused capacity-building of teachers for upward integration of play.

Endnotes

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Letters to the Editor

The articles, *Learning to Adapt* by Akshatha S Belludi and *Environmental Studies on Conference Calls* by Anil Kumar Patel, are very motivating. The efforts put in by the teachers, given the circumstances, is laudable. And the ways in which teachers engage with children shows how creative they are. The painstaking follow-ups for maintaining a steady student strength in online EVS classes and *WhatsApp* assignments is reassuring. Besides, I cannot imagine how the teachers managed to keep students interested throughout the session because it is difficult even in physical classrooms.

In another article, the case study about a teacher who started an online forum for children after persuading the parents is inspiring. The process of starting from parents to students and then connecting with the rural panchayat is highly encouraging. This reminds me of the olden days when the school was part of the community and all worked and learned together as a community.

Gowthama TR, *District Institute, Azim Premji Foundation, Puducherry*

I am final year student. Articles from the *Learning Curve* helped me with my assignments and ITR (Introduction to Research). I know the far reach of the magazine and how much these opinions and experience stories of different people matter.

Tanisha RY, *Student, MA Education, Azim Premji University, Bengaluru*

I am writing in appreciation of the recent *Learning Curve* issue on 'Education for Citizenship', which is timely and covers a deeply important topic. It offers a variety of perspectives, experiments and reflections on notions of citizenship. I find the material insightful, and I am encouraging my former Vidya Bhawan colleagues – at schools and teacher colleges – to read, reflect and act on some of the material in this issue. Sadly, the pandemic and the anxieties and struggles around it are becoming yet another reason for notions of citizenship to be de-emphasised in education, which makes it all the more important to flag it as this *Learning Curve* issue has done.

I am curious to know how practitioners receive this issue and how this material may loop back into school practices.

Suraj Jacob, *Visiting Faculty, Azim Premji University, Bengaluru*

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This magazine is also printed and published in Hindi and Kannada.

For suggestions, comments and to share your personal experiences, write to us at
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Printed and Published by Manoj P on behalf of Azim Premji Foundation for Development
Printed at Repromen Offset Printers Pvt. Ltd., #46/47, 3rd Cross, Krishna Reddy Colony, Domlur Layout, Bengaluru 560071

Published at Azim Premji University, Survey No. 66, Burugunte Village, Bikkanahalli Main Road, Sarjapura, Bengaluru 562125, Karnataka
Chief Editor: Prema Raghunath

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Coping with Lost Time

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